

# Volume 2: Appendices



## Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

PREPARED FOR:

City/County Association of Governments of San Mateo County  
Redwood City, California



IN ASSOCIATION WITH:

Jacobs Consultancy  
Clarion Associates

JULY 2012  
DRAFT FINAL



# Volume 2: Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

**PREPARED FOR:**

The City/County Association of Governments of San Mateo County (C/CAG) Board of Directors in its Designated Role as the Airport Land Use Commission for San Mateo County, Redwood City, California

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Jacobs Consultancy

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**Final Draft**

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# Appendix A

## Glossary



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## Appendix A

### GLOSSARY

**A-Weighted Sound (dBA):** A system for measuring sound energy that is designed to represent the response of the human ear to sound. Energy at frequencies more readily detected by the human ear is more heavily weighted in the measurement, while frequencies less well detected are assigned lower weights. A-weighted sound measurements are commonly used in studies where the human response to sound is the object of the analysis.

**Air Route Traffic Control Center (ARTCC or Center):** A FAA facility established to provide air traffic control service to aircraft operating on Instrument Flight Rules (IFR) flight plans within controlled airspace during the en route portion of flight.

**Air Traffic Control (ATC):** A service operated to promote the safe, orderly, and expeditious flow of air traffic.

**Airport Operations:** Landings (arrivals) and takeoffs (departures) from an airport.

**Base Leg:** A flight path at right angles to the approach to the runway end. It usually extends from the downwind leg to the intersection of the extended runway centerline. See “traffic pattern.”

**California Environmental Quality Act (CEQA):** Statutes adopted by the California legislature for maintaining a quality environment for the people of the state now and in the future. CEQA establishes a process for state and local agency review of projects, as defined in the implementing guidelines, that may adversely affect the environment (California Public Resources Code §§2100-21178).

**CEQA:** See California Environmental Quality Act.

**Commuter Aircraft:** Commuters are commercial operators that provide regularly scheduled passenger or cargo service with aircraft seating less than 60 passengers.

**Controlled Airspace:** Airspace of a defined dimension that has air traffic control service provided to IFR flights and to VFR flights in accordance with the airspace classification. Controlled airspace is designated as Class A, Class B, Class C, Class D, or Class E. Aircraft operators are subject to certain pilot qualifications, operating rules, and equipment requirements as specified in FAR Part 91, depending upon the class of airspace in which they are operating.

**Crosswind Leg:** A flight path at right angles to the runway approach connecting the upwind leg to the downwind leg of the traffic pattern.



**Day-Night Average Sound Level (DNL):** A noise measure used to describe the cumulative sound level over a 24-hour period, typically an average day over the course of a year. In computing DNL, an extra weight of 10 decibels is assigned to noise occurring between the hours of 10 p.m. and 7 a.m. to account for increased annoyance when ambient noise levels are lower and people are trying to sleep.

**Decibel (dB):** A logarithmic unit of measurement that expresses the magnitude of sound pressure relative to a reference level of 20 micropascals, the lowest audible sound pressure level. A 10-decibel increase in sound is equal to a tenfold increase in sound pressure.

**Displaced Threshold:** A landing threshold located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold may be available for takeoffs in both directions and landings from the opposite direction.

**Easement:** The legal right of one party to use part of the real estate belonging to another party. This may include, but is not limited to, the right of passage over, on or below the property; certain air rights above the property, including view rights; and the rights to any specified form of development or activity.

**Enplanements:** The number of passengers boarding an aircraft at an airport. Does not include arriving or through passengers.

**Environmental Assessment (EA):** A concise document that assesses the environmental effects of a proposed Federal Action. It discusses the need for, and environmental impacts of, the proposed action and alternatives. An environmental assessment should provide sufficient evidence and analysis for a Federal determination whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

**Environmental Impact Statement (EIS):** An EIS is a document that provides a discussion of the significant environmental impacts that would occur as a result of a proposed project, and informs decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts.

**Federal Aviation Administration (FAA):** The FAA is the Federal agency responsible for insuring the safe and efficient use of the nation's airspace, for fostering civil aeronautics and air commerce, and for supporting the requirements of national defense. The activities required to carry out these responsibilities include: issuance and administration of safety regulations; airspace management and the establishment, operation, and maintenance of a system of air traffic control and navigation facilities; research and development in support of the fostering of a national system of airports, promulgation of standards and specifications for civil airports, and administration of Federal grants-in-aid for developing public airports;

various joint and cooperative activities with the Department of Defense; and technical assistance (under State Department auspices) to other countries.

**Federal Aviation Regulations (FAR):** The body of Federal regulations relating to aviation (published as Title 14 of the Code of Federal Regulations (CFR)).

**Final Approach:** A flight path that follows the extended runway centerline. It usually extends from the base leg to the runway.

**Glide Slope (GS):** Electronic and visual systems providing vertical guidance for aircraft during approach and landing. The glide slope consists of the following:

- Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS, or
- Visual ground aids, such as VASI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

**Global Positioning System (GPS):** A system of satellites used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude, and altitude. The accuracy of the system can be further refined by using a ground receiver at a known location to calculate the error in the satellite range data. This is known as differential GPS (DGPS).

**Instrument Approach:** A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

**Instrument Flight Rules (IFR):** That portion of the Federal Aviation Regulations (14 CFR 91) specifying the procedures to be used by aircraft during flight in Instrument Meteorological Conditions. These procedures may also be used under visual conditions and provide for positive control by ATC. (See also VFR).

**Instrument Landing System (ILS):** An electronic system installed at some airports which provides lateral and vertical guidance for approaches and landings during periods of limited visibility or adverse weather.

**Integrated Noise Model (INM):** A computer model developed, updated and maintained by the FAA to predict the noise exposure generated by aircraft operations at an airport.

**Ldn:** See **Day-Night Average Sound Level (DNL)**. Ldn is used in place of DNL in mathematical equations only.

**Mean Sea Level (MSL):** The average height of the surface of the sea for all stages of the tide; used as a reference for elevations (also called sea level datum).

**Missed Approach:** A procedure prescribed for aircraft to follow when they cannot complete an attempted landing at an airport.

**Narrow-body Aircraft:** A commercial passenger jet that has a single aisle and a maximum of three seats on each side of the aisle. Common narrow-body aircraft include the A320, B717, B737, B757, and MD80.

**National Airspace System (NAS):** The common network of U.S. airspace; air navigation facilities, equipment, services, airports, or landing areas; aeronautical charts, information, and services; rules, regulations, and procedures; technical information, manpower, and materials, all of which are used in aerial navigation.

**National Environmental Policy Act of 1969 (NEPA):** The original legislation establishing the environmental review process for proposed Federal Actions.

**Nautical Mile:** A measure of distance equal to one minute of arc along a meridian of latitude on the earth's surface (1,852 meters or 6,076.1 feet).

**NAVAIDs (Navigational Aids):** Any facility used by an aircraft for navigation.

**Noise Abatement:** A measure or action that minimizes the amount of impact of noise on the environs of an airport. Noise abatement measures include aircraft operating procedures and use or disuse of certain runways or flight tracks.

**Noise Contour Map:** A map representing average annual noise levels summarized by lines connecting points of equal noise exposure.

**Nonprecision Approach:** A standard instrument approach procedure providing runway alignment but no glide slope or descent information.

**One Engine Inoperative (OEI) Procedures:** Procedures required of commercial operators of multi-engine aircraft, mandated by federal regulation, that allow aircraft to safely climb after takeoff with the complete loss of power to one engine.

**Operation:** A takeoff or landing by an aircraft.

**Precision Approach Procedure:** A standard instrument approach procedure in which an electronic glideslope/glidepath is provided (e.g., ILS).

**Primary Commercial Service Airport:** A commercial airport which enplanes 0.01 percent or more of the total annual U.S. enplanements.

**Profile:** The position of the aircraft during an approach or departure in terms of altitude above the runway and distance from the runway end.

**Public Use Airport:** An airport that is open to public use without prior permission, and without restrictions within the physical capabilities of the facility. It may or may not be publicly owned.

**Run-Up:** A routine procedure for testing aircraft systems by running one or more engines at a high power setting. Engine run-ups are normally conducted by aircraft maintenance personnel checking an engine or other on board systems following maintenance.

**Runway Protection Zone (RPZ):** An area, trapezoidal in shape and centered about the extended runway centerline, designated to enhance the safety of aircraft operations. It begins 200 feet (60 M) beyond the end of the area usable for takeoff or landing. The RPZ dimensions are functions of the aircraft, type of operation and visibility minimums at the airport (formerly known as the clear zone).

**Runway Safety Area (RSA):** A defined surface surrounding the runway prepared or suitable for reducing the risk or damage to airplanes in the event of a runway undershoot, overshoot, or excursion.

**Runway Threshold:** The beginning of the portion of the runway that is usable for landing.

**Single Event:** One noise event. Sound from single events may be described by the maximum instantaneous sound level ( $L_{max}$ ) or the Sound Exposure Level (SEL) metric.

**Sound:** Sound is the result of vibration in the air. The vibrations produce fluctuations in the normal atmospheric pressure similar to ripples on a pond. Vibrations in the audible range are heard as sound.

**Sound Exposure Level (SEL):** A standardized measure of a single sound event, expressed in A-weighted decibels, that takes into account all sound above a specified threshold set at least 10 decibels below the maximum level. All sound energy in the event is integrated over one second.

**Standard Instrument Departure Procedure (SID):** A planned IFR air traffic control departure procedure published for pilot use in graphic and textual form. A SID provides transition from the terminal to the en route air traffic control structure.

**Standard Terminal Arrival Route (STAR):** A planned IFR air traffic control arrival procedure published for pilot use in graphic and textual form. STARs provide transition from the en route air traffic control structure to an outer fix or an instrument approach fix in the terminal area.

**Statute Mile:** A measure of distance equal to 5,280 feet.

**Terminal Radar Approach Control (TRACON):** An FAA Air Traffic Control Facility which uses radar and two-way communication to provide separation of air traffic within a specified geographic area in the vicinity of one or more airports.

**TERPS:** Imaginary airspace surfaces established according to the criteria published in FAA Order 8260.3B, U.S. Standard for Terminal Instrument Procedures (TERPS). The surfaces are designed to ensure the safe separation of aircraft operating under instrument procedures from manmade and natural obstructions. The term, TERPS, is also used more generally in reference to the applicable FAA order.

**Traffic Pattern:** The traffic flow for aircraft landing and departing an airport. Typical components of the traffic pattern include: upwind leg, crosswind leg, downwind leg, base leg, and final approach.

**Upwind Leg:** A flight path parallel to the approach runway in the direction of approach.

**Vector:** Compass heading instructions issued by ATC in providing navigational guidance by radar.

**Very High Frequency Omnidirectional Range (VOR) Station:** A ground-based radio navigation aid transmitting signals in all directions. A VOR provides azimuth guidance to pilots by reception of electronic signals.

**Very High Frequency Omnidirectional Range Station with Tactical Air Navigation (VORTAC):** A navigational aid providing VOR azimuth and TACAN distance measuring equipment at one site.

**Visual Approach:** An approach conducted on an IFR flight plan which authorizes the pilot to proceed visually and clear of clouds to the airport.

**Visual Flight Rules (VFR):** Rules and procedures specified in 14 CFR 91 for aircraft operations under visual conditions. Aircraft operations under VFR are not generally under positive control by ATC. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate a type of flight plan.

**Wide-Body Aircraft:** A commercial jet with a wingspan generally greater than 155 feet and, in passenger configuration, having two aisles with 8 to 11 seats across in a row. Common wide-body aircraft include the A300, A310, B747, B767, and B777.

**Yearly Day-Night Average Sound Level:** see **Day-Night Average Sound Level.**

## **Appendix B**

### **State Laws Related to Airport Land Use Planning**



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**AERONAUTICS LAW**  
**PUBLIC UTILITIES CODE**  
**Division 9, Part 1**  
**Chapter 4—Airports and Air Navigation Facilities**  
**Article 2.7—Regulation of Obstructions**  
**(excerpts)**

**21655. Proposed Site for Construction of State Building Within Two Miles of Airport Boundary**

Notwithstanding any other provision of law, if the proposed site of any state building or other enclosure is within two miles, measured by air line, of that point on an airport runway, or runway proposed by an airport master plan, which is nearest the site, the state agency or office which proposes to construct the building or other enclosure shall, before acquiring title to property for the new state building or other enclosure site or for an addition to a present site, notify the Department of Transportation, in writing, of the proposed acquisition. The department shall investigate the proposed site and, within 30 working days after receipt of the notice, shall submit to the state agency or office which proposes to construct the building or other enclosure a written report of the investigation and its recommendations concerning acquisition of the site.

If the report of the department does not favor acquisition of the site, no state funds shall be expended for the acquisition of the new state building or other enclosure site, or the expansion of the present site, or for the construction of the state building or other enclosure, provided that the provisions of this section shall not affect title to real property once it is acquired.

**21658.**

No public utility shall construct any pole, pole line, distribution or transmission tower, or tower line, or substation structure in the vicinity of the exterior boundary of an aircraft landing area of any airport open to public use, in a location with respect to the airport and at a height so as to constitute an obstruction to air navigation, as an obstruction is defined in accordance with Part 77 of the Federal Aviation Regulations, Federal Aviation Administration, or any corresponding rules or regulations of the Federal Aviation Administration, unless the Federal Aviation Administration has determined that the pole, line, tower, or structure does not constitute a hazard to air navigation. This section shall not apply to existing poles, lines, towers, or structures or to the repair, replacement, or reconstruction thereof if the original height is not materially exceeded and this section shall not apply unless just compensation shall have first been paid to the public utility by the owner of any airport for any property or property rights which would be taken or damaged hereby.

**21659.**

- (a) No person shall construct or alter any structure or permit any natural growth to grow at a height which exceeds the obstruction standards set forth in the regulations of the Federal Aviation Administration relating to objects affecting navigable airspace contained in Title 14 of the Code of Federal Regulations, Part 77, Subpart C, unless a permit allowing the construction, alteration, or growth is issued by the department.
- (b) The permit is not required if the Federal Aviation Administration has determined that the construction, alteration, or growth does not constitute a hazard to air navigation or would not create an unsafe condition for air navigation. Subdivision (a) does not apply to a pole, pole line, distribution or transmission tower, or tower line or substation of a public utility.
- (c) Section 21658 is applicable to subdivision (b).

**AERONAUTICS LAW**  
**PUBLIC UTILITIES CODE**  
**Division 9, Part 1**  
**Chapter 4—Airports and Air Navigation Facilities**  
**Article 3—Regulation of Airports (excerpts)**

**21661.5. City Council or Board of Supervisors and ALUC Approvals**

- (a) No political subdivision, any of its officers or employees, or any person may submit any application for the construction of a new airport to any local, regional, state, or federal agency unless the plan for such construction is first approved by the board of supervisors of the county, or the city council of the city, in which the airport is to be located and unless the plan is submitted to the appropriate commission exercising powers pursuant to Article 3.5 (commencing with Section 21670) of Chapter 4 of Part 1 of Division 9, and acted upon by such commission in accordance with the provisions of such article.
- (b) A county board of supervisors or a city council may, pursuant to Section 65100 of the Government Code, delegate its responsibility under this section for the approval of plan for construction of new helicopter landing and takeoff areas, to the county or city planning agency.

**21664.5. Amended Airport Permits; Airport Expansion Defined**

- (a) An amended airport permit shall be required for every expansion of an existing airport. An applicant for an amended airport permit shall comply with each requirement of this article pertaining to permits for new airports. The department may by regulation provide for exemptions from the operation of the section pursuant to Section 21661, except that no exemption shall be made limiting the applicability of subdivision (e) of Section 21666, pertaining to environmental considerations, including the requirement for public hearings in connection therewith.
- (b) As used in this section, “airport expansion” includes any of the following:
  - (1) The acquisition of runway protection zones, as defined in Federal Aviation Administration Advisory Circular 150/5300-13, or of any interest in land for the purpose of any other expansion as set forth in this section.
  - (2) The construction of a new runway.
  - (3) The extension or realignment of an existing runway.

- (4) Any other expansion of the airport's physical facilities for the purpose of accomplishing or which are related to the purpose of paragraph (1), (2), or (3).
- (c) This section does not apply to any expansion of an existing airport if the expansion commenced on or prior to the effective date of this section and the expansion met the approval on or prior to that effective date of each governmental agency that by law required the approval by law.

**AERONAUTICS LAW**  
**PUBLIC UTILITIES CODE**  
**Division 9—Aviation**  
**Part 1—State Aeronautics Act**  
**Chapter 4—Airports and Air Navigation Facilities**  
**Article 3.5—Airport Land Use Commission**

**21670. Creation; Membership; Selection**

- (a) The Legislature hereby finds and declares that:
- (1) It is in the public interest to provide for the orderly development of each public use airport in this state and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards adopted pursuant to Section 21669 and to prevent the creation of new noise and safety problems.
  - (2) It is the purpose of this article to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.
- (b) In order to achieve the purposes of this article, every county in which there is located an airport which is served by a scheduled airline shall establish an airport land use commission. Every county, in which there is located an airport which is not served by a scheduled airline, but is operated for the benefit of the general public, shall establish an airport land use commission, except that the board of supervisors for the county may, after consultation with the appropriate airport operators and affected local entities and after a public hearing, adopt a resolution finding that there are no noise, public safety, or land use issues affecting any airport in the county which require the creation of a commission and declaring the county exempt from that requirement. The board shall, in this event, transmit a copy of the resolution to the Director of Transportation. For purposes of this section, "commission" means an airport land use commission. Each commission shall consist of seven members to be selected as follows:
- (1) Two representing the cities in the county, appointed by a city selection committee comprised of the mayors of all the cities within that county, except that if there are any cities contiguous

or adjacent to the qualifying airport, at least one representative shall be appointed therefrom. If there are no cities within a county, the number of representatives provided for by paragraphs (2) and (3) shall each be increased by one.

- (2) Two representing the county, appointed by the board of supervisors.
  - (3) Two having expertise in aviation, appointed by a selection committee comprised of the managers of all the public airports within that county.
  - (4) One representing the general public, appointed by the other six members of the commission.
- (c) Public officers, whether elected or appointed, may be appointed and serve as members of the commission during their terms of public office.
  - (d) Each member shall promptly appoint a single proxy to represent him or her in commission affairs and to vote on all matters when the member is not in attendance. The proxy shall be designated in a signed written instrument which shall be kept on file at the commission offices, and the proxy shall serve at the pleasure of the appointing member. A vacancy in the office of proxy shall be filled promptly by appointment of a new proxy.
  - (e) A person having an "expertise in aviation" means a person who, by way of education, training, business, experience, vocation, or avocation has acquired and possesses particular knowledge of, and familiarity with, the function, operation, and role of airports, or is an elected official of a local agency which owns or operates an airport.
  - (f) It is the intent of the Legislature to clarify that, for the purposes of this article, special districts, school districts and community college districts are included among the local agencies that are subject to airport land use laws and other requirements of this article.

**21670.1. Action by Designated Body Instead of Commission**

- (a) Notwithstanding any other provision of this article, if the board of supervisors and the city selection committee of mayors in the county each makes a determination by a majority vote that proper land use planning can be accomplished through the actions of an appropriately designated body, then the body so designated shall assume the planning

responsibilities of an airport land use commission as provided for in this article, and a commission need not be formed in that county.

- (b) A body designated pursuant to subdivision (a) that does not include among its membership at least two members having expertise in aviation, as defined in subdivision (e) of Section 21670, shall, when acting in the capacity of an airport land use commission, be augmented so that the body, as augmented, will have at least two members having that expertise. The commission shall be constituted pursuant to this section on and after March 1, 1988.
- (1) Notwithstanding subdivisions (a) and (b), and subdivision (b) of Section 21670, if the board of supervisors of a county and each affected city in that county each makes a determination that proper land use planning pursuant to this article can be accomplished pursuant to this subdivision, then a commission need not be formed in that county.
- (2) If the board of supervisors of a county and each affected city makes a determination that proper land use planning may be accomplished and a commission is not formed pursuant to paragraph (1) that county and the appropriate affected cities having jurisdiction over an airport, subject to the review and approval by the Division of Aeronautics of the department, shall do all of the following:
  - (A) Adopt processes for the preparation, adoption, and amendment of the airport land use compatibility plan for each airport that is served by a scheduled airline or operated for the benefit of the general public.
  - (B) Adopt processes for the notification of the general public, landowners, interested groups, and other public agencies regarding the preparation, adoption, and amendment of the airport land use compatibility plans.
  - (C) Adopt processes for the mediation of disputes arising from the preparation, adoption, and amendment of the airport land use compatibility plans.
  - (D) Adopt processes for the amendment of general and specific plans to be consistent with the airport land use compatibility plans.



- (D) Designate the agency that shall be responsible for the preparation, adoption, and amendment of each airport land use compatibility plan.
- (3) The Division of Aeronautics of the department shall review the processes adopted pursuant to paragraph (2), and shall approve the processes if the division determines that the processes are consistent with the procedure required by this article and will do all of the following:
- (A) Result in the preparation, adoption, and implementation of plans within a reasonable amount of time.
  - (B) Rely on the height, use, noise, safety, and density criteria that are compatible with airport operations, as established by this article, and referred to as the Airport Land Use Planning Handbook, published by the division, and any applicable federal aviation regulations, including, but not limited to, Part 77 (commencing with Section 77.1) of Title 14 of the Code of Federal Regulations.
  - (C) Provide adequate opportunities for notice to, review of, and comment by the general public, landowners, interested groups, and other public agencies.
- (4) If the county does not comply with the requirements of paragraph (2) within 120 days, then the airport land use compatibility plan and amendments shall not be considered adopted pursuant to this article and a commission shall be established within 90 days of the determination of noncompliance by the division and an airport land use compatibility plan shall be adopted pursuant to this article within 90 days of the establishment of the commission.
- (c) A commission need not be formed in a county that has contracted for the preparation of airport land use compatibility plans with the Division of Aeronautics under the California Aid to Airport Program (Chapter 4 (commencing with Section 4050) of Title 21 of the California Code of Regulations), Project Ker-VAR 90-1, and that submits all of the following information to the Division of Aeronautics for review and comment that the county and the cities affected by the airports within the county, as defined by the airport land use compatibility plans:

- (1) Agree to adopt and implement the airport land use compatibility plans that have been developed under contract.
  - (2) Incorporated the height, use, noise, safety, and density criteria that are compatible with airport operations as established by this article, and referred to as the Airport Land Use Planning Handbook, published by the division, and any applicable federal aviation regulations, including, but not limited to, Part 77 (commencing with Section 77.1) of Title 14 of the Code of Federal Regulations as part of the general and specific plans for the county and for each affected city.
  - (3) If the county does not comply with this subdivision on or before May 1, 1995, then a commission shall be established in accordance with this article.
- (d) A commission need not be formed in a county if all of the following conditions are met:
- (1) The county has only one public use airport that is owned by a city.
  - (2) (i) The county and the affected city adopt the elements in paragraph (2) of subdivision (d), as part of their general and specific plans for the county and the affected city.
 

(ii) The general and specific plans shall be submitted, upon adoption, to the Division of Aeronautics. If the county and the affected city do not submit the elements specified in paragraph (2) of subdivision (d), on or before May 1, 1996, then a commission shall be established in accordance with this article.

**21670.2. Application to Counties Having over 4 Million in Population**

- (a) Sections 21670 and 21670.1 do not apply to the County of Los Angeles. In that county, the county regional planning commission has the responsibility for coordinating the airport planning of public agencies within the county. In instances where impasses result relative to this planning, an appeal may be made to the county regional planning commission by any public agency involved. The action taken by the county regional planning commission on such an appeal may be overruled by a four-fifths vote of the governing body of a public agency whose planning led to the appeal.

- (b) By January 1, 1992, the county regional planning commission shall adopt the airport land use compatibility plans required pursuant to Section 21675.
- (c) Sections 21675.1, 21675.2, and 21679.5 do not apply to the County of Los Angeles until January 1, 1992. If the airport land use compatibility plans required pursuant to Section 21675 are not adopted by the county regional planning commission by January 1, 1992, Sections 21675.1 and 21675.2 shall apply to the County of Los Angeles until the airport land use compatibility plans are adopted.

**21670.3 San Diego County**

- (a) Sections 21670 and 21670.1 do not apply to the County of San Diego. In that county, the San Diego County Regional Airport Authority, as established pursuant to Section 170002, shall be responsible for the preparation, adoption, and amendment of an airport land use compatibility plan for each airport in San Diego County.
- (b) The San Diego County Regional Airport Authority shall engage in a public collaborative planning process when preparing and updating an airport land use compatibility plan.

**21670.4. Intercounty Airports**

- (a) As used in this section, “intercounty airport” means any airport bisected by a county line through its runways, runway protection zones, inner safety zones, inner turning zones, outer safety zones, or sideline safety zones, as defined by the department’s Airport Land Use Planning Handbook and referenced in the airport land use compatibility plan formulated under Section 21675.
- (b) It is the purpose of this section to provide the opportunity to establish a separate airport land use commission so that an intercounty airport may be served by a single airport land use planning agency, rather than having to look separately to the airport land use commissions of the affected counties.
- (c) In addition to the airport land use commissions created under Section 21670 or the alternatives established under Section 21670.1, for their respective counties, the boards of supervisors and city selection committees for the affected counties, by independent majority vote of each county’s two delegations, for any intercounty airport, may do either of the following:

- (1) Establish a single separate airport land use commission for that airport. That commission shall consist of seven members to be selected as follows:
  - (A) One representing the cities in each of the counties, appointed by that county's city selection committee.
  - (B) One representing each of the counties, appointed by the board of supervisors of each county.
  - (C) One from each county having expertise in aviation, appointed by a selection committee comprised of the managers of all the public airports within that county.
  - (D) One representing the general public, appointed by the other six members of the commission.
- (2) In accordance with subdivision (a) or (b) of Section 21670.1, designate an existing appropriate entity as that airport's land use commission.

**21671. Airports Owned by a City, District, or County**

In any county where there is an airport operated for the general public which is owned by a city or district in another county or by another county, one of the representatives provided by paragraph (1) of subdivision (b) of Section 21670 shall be appointed by the city selection committee of mayors of the cities of the county in which the owner of that airport is located, and one of the representatives provided by paragraph (2) subdivision (b) of Section 21670 shall be appointed by the board of supervisors of the county in which the owner of that airport is located.

**21671.5. Term of Office**

- (a) Except for the terms of office of the members of the first commission, the term of office of each member shall be four years and until the appointment and qualification of his or her successor. The members of the first commission shall classify themselves by lot so that the term of office of one member is one year, of two members is two years, of two members is three years, and of two members if four years. The body that originally appointed a member whose term has expired shall appoint his or her successor for a full term of four years. Any member may be removed at any time and without cause by the body appointing that member. The expiration date of the term of office of each member shall be the first Monday in May in the year in which that member's term is to expire. Any vacancy in the membership of the commission shall be filled for the unexpired term by appointment by the body which

originally appointed the member whose office has become vacant. The chairperson of the commission shall be selected by the members thereof.

- (b) Compensation, if any, shall be determined by the board of supervisors.
- (c) Staff assistance, including the mailing of notices and the keeping of minutes, and necessary quarters, equipment, and supplies shall be provided by the county. The usual and necessary expenses of the commission shall be a county charge.
- (d) Notwithstanding any other provisions of this article, the commission shall not employ any personnel either as employees or independent contractors without the prior approval of the board of supervisors.
- (e) The commission shall meet at the call of the commission chairperson or at the request of the majority of the commission members. A majority of the commission members shall constitute a quorum for the transaction of business. No action shall be taken by the commission except by the recorded vote of a majority of the full membership.
- (f) The commission may establish a schedule of fees necessary to comply with this article. Those fees shall be charged to the proponents of actions, regulations, or permits, shall not exceed the estimated reasonable cost of providing the service, and shall be imposed pursuant to Section 66016 of the Government Code. Except as provided in subdivision (g), after June 30, 1991, a commission which has not adopted the airport land use compatibility plan required by Section 21675 shall not charge fees pursuant to this subdivision until the commission adopts the plan.
- (g) In any county which has undertaken by contract or otherwise completed land use plans for at least one-half of all public use airports in the county, the commission may continue to charge fees necessary to comply with this article until June 30, 1992, and, if the land use plans are complete by that date, may continue charging fees after June 30, 1992. If the airport land use compatibility plans are not complete by June 30, 1992, the commission shall not charge fees pursuant to subdivision (f) until the commission adopts the land use plans.

#### **21672. Rules and Regulations**

Each commission shall adopt rules and regulations with respect to the temporary disqualification of its members from participating in the review or adoption of a proposal because of conflict of interest and with respect to appointment of substitute members in such cases.

**21673. Initiation of Proceedings for Creation by Owner of Airport**

In any county not having a commission or a body designated to carry out the responsibilities of a commission, any owner of a public airport may initiate proceedings for the creation of a commission by presenting a request to the board of supervisors that a commission be created and showing the need therefore to the satisfaction of the board of supervisors.

**21674. Powers and Duties**

The commission has the following powers and duties, subject to the limitations upon its jurisdiction set forth in Section 21676:

- (a) To assist local agencies in ensuring compatible land uses in the vicinity of all new airports and in the vicinity of existing airports to the extent that the land in the vicinity of those airports is not already devoted to incompatible uses.
- (b) To coordinate planning at the state, regional, and local levels so as to provide for the orderly development of air transportation, while at the same time protecting the public health, safety, and welfare.
- (c) To prepare and adopt an airport land use compatibility plan pursuant to Section 21675.
- (d) To review the plans, regulations, and other actions of local agencies and airport operators pursuant to Section 21676.
- (e) The powers of the commission shall in no way be construed to give the commission jurisdiction over the operation of any airport.
- (f) In order to carry out its responsibilities, the commission may adopt rules and regulations consistent with this article.

**21674.5. Training of Airport Land Use Commission's Staff**

- (a) The Department of Transportation shall develop and implement a program or programs to assist in the training and development of the staff of airport land use commissions, after consulting with airport land use commissions, cities, counties, and other appropriate public entities.
- (b) The training and development program or programs are intended to assist the staff of airport land use commissions in addressing high priority needs, and may include, but need not be limited to, the following:

- (1) The establishment of a process for the development and adoption of airport land use compatibility plans.
  - (2) The development of criteria for determining the airport influence area.
  - (3) The identification of essential elements which should be included in the airport land use compatibility plans.
  - (4) Appropriate criteria and procedures for reviewing proposed developments and determining whether proposed developments are compatible with the airport use.
  - (5) Any other organizational, operational, procedural, or technical responsibilities and functions that the department determines to be appropriate to provide the commission staff and for which it determines there is a need for staff training and development.
- (c) The department may provide training and development programs for airport land commission staff pursuant to this section by any means it deems appropriate. Those programs may be presented in any of the following ways:
- (1) By offering formal courses or training programs.
  - (2) By sponsoring or assisting in the organization and sponsorship of conferences, seminars, or other similar events.
  - (3) By producing and making available written information.
  - (4) Any other feasible method of providing information and assisting in the training and development of airport land use commission staff.

**21674.7. Airport Land Use Planning Handbook**

- (a) An airport land use commission that formulates, adopts or amends an airport land use compatibility plan shall be guided by information prepared and updated pursuant to Section 21674.5 and referred to as the Airport Land Use Planning Handbook published by the Division of Aeronautics of the Department of Transportation.
- (b) It is the intent of the Legislature to discourage incompatible land uses near existing airports. Therefore, prior to granting permits for the renovation or remodeling of an existing building, structure, or facility,

and before the construction of a new building, it is the intent of the Legislature that local agencies shall be guided by the height, use, noise, safety, and density criteria that are compatible with airport operations, as established by this article, and referred to as the Airport Land Use Planning Handbook, published by the division, and any applicable federal aviation regulations, including, but not limited to, Part 77 (commencing with Section 77.1) of Title 14 of the Code of Federal Regulations, to the extent that the criteria has been incorporated into the plan prepared by a commission pursuant to Section 21675. This subdivision does not limit the jurisdiction of a commission as established by this article. This subdivision does not limit the authority of local agencies to overrule commission actions or recommendations pursuant to Sections 21676, 21676.5, or 21677.

**21675. Land Use Plan**

- (a) Each commission shall formulate an airport land use compatibility plan that will provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The commission airport land use compatibility plan shall include and shall be based on a long-range master plan or an airport layout plan, as determined by the Division of Aeronautics of the Department of Transportation, which reflects the anticipated growth of the airport during at least the next 20 years. In formulating an airport land use compatibility plan, the commission may develop height restrictions on buildings, specify use of land, and determine building standards, including soundproofing adjacent to airports, within the planning area. The airport land use compatibility plan shall be reviewed as often as necessary in order to accomplish its purposes, but shall not be amended more than once in any calendar year.
- (b) The commission shall include, within its airport land use compatibility plan formulated pursuant to subdivision (a), the area within the jurisdiction of the commission surrounding any military airport for all the purpose specified in subdivision (a). The airport land use compatibility plan shall be consistent with the safety and noise standards in the Air Installation Compatible Use Zone prepared for that military airport. This subdivision does not give the commission any jurisdiction or authority over the territory or operations of any military airport.



- (c) The airport influence area boundaries shall be established by the commission after hearing and consultation with the involved agencies.
- (d) The commission shall submit to the Division of Aeronautics of the department one copy of the plan and each amendment to the plan.
- (e) If an airport land use compatibility plan does not include the matters required to be included pursuant to this article, the Division of Aeronautics of the department shall notify the commission responsible for the plan.

**21675.1. Adoption of Land Use Plan**

- (a) By June 30, 1991, each commission shall adopt the airport land use compatibility plan required pursuant to Section 21675, except that any county that has undertaken by contract or otherwise completed airport land use compatibility plans for at least one-half of all public use airports in the county shall adopt the airport land use compatibility plan on or before June 30, 1992.
- (b) Until a commission adopts an airport land use compatibility plan, a city or county shall first submit all actions, regulations, and permits within the vicinity of a public airport to the commission for review and approval. Before the commission approves or disapproves any actions, regulations, or permits, the commission shall give public notice in the same manner as the city or county is required to give for those actions, regulations, or permits. As used in this section, "vicinity" means land that will be included or reasonably could be included within the airport land use compatibility plan. If the commission has not designated an airport influence area, then "vicinity" means land within two miles of the boundary of a public airport.
- (c) The commission may approve an action, regulation, or permit if it finds, based on substantial evidence in the record, all of the following:
  - (1) The commission is making substantial progress toward the completion of the airport land use compatibility plan.
  - (2) There is a reasonable probability that the action, regulation, or permit will be consistent with the airport land use compatibility plan being prepared by the commission.
  - (3) There is little or no probability of substantial detriment to or interference with the future adopted airport land use compatibility plan if the action, regulation, or permit is

ultimately inconsistent with the airport land use compatibility plan.

- (d) If the commission disapproves an action, regulation, or permit, the commission shall notify the city or county. The city or county may overrule the commission, by a two-thirds vote of its governing body, if it makes specific findings that the proposed action, regulation, or permit is consistent with the purposes of this article, as stated in Section 21670.
- (e) If a city or county overrules the commission pursuant to subdivision (d), that action shall not relieve the city or county from further compliance with this article after the commission adopts the airport land use compatibility plan.
- (f) If a city or county overrules the commission pursuant to subdivision (d) with respect to a publicly owned airport that the city or county does not operate, the operator of the airport is not liable for damages to property or personal injury from the city's or county's decision to proceed with the action, regulation, or permit.
- (g) A commission may adopt rules and regulations that exempt any ministerial permit for single-family dwellings from the requirements of subdivision (b) if it makes the findings required pursuant to subdivision (c) for the proposed rules and regulations, except that the rules and regulations may not exempt either of the following:
  - (1) More than two single-family dwellings by the same applicant within a subdivision prior to June 30, 1991.
  - (2) Single-family dwellings in a subdivision where 25 percent or more of the parcels are undeveloped.

**21675.2. Approval or Disapproval of Actions, Regulations, or Permits**

- (a) If a commission fails to act to approve or disapprove any actions, regulations, or permits within 60 days of receiving the request pursuant to Section 21675.1, the applicant or his or her representative may file an action pursuant to Section 1094.5 of the Code of Civil Procedure to compel the commission to act, and the court shall give the proceedings preference over all other actions or proceedings, except previously filed pending matters of the same character.
- (b) The action, regulation, or permit shall be deemed approved only if the public notice required by this subdivision has occurred. If the applicant has provided seven days advance notice to the commission of the intent

to provide public notice pursuant to this subdivision, then, not earlier than the date of the expiration the time limit established by Section 21675.1, an applicant may provide the required public notice. If the applicant chooses to provide public notice, that notice shall include a description of the proposed action, regulation, or permit substantially similar to the descriptions which are commonly used in public notices by the commission, the name and address of the commission, and a statement that the action, regulation, or permit shall be deemed approved if the commission has not acted within 60 days. If the applicant has provided the public notice specified in this subdivision, the time limit for action by the commission shall be extended to 60 days after the public notice is provided. If the applicant provides notice pursuant to this section, the commission shall refund to the applicant any fees which were collected for providing notice and which were not used for that purpose.

- (c) Failure of an applicant to submit complete or adequate information pursuant to Sections 65943 to 65946, inclusive, of the Government Code, may constitute grounds for disapproval of actions, regulations, or permits.
- (d) Nothing in this section diminishes the commission's legal responsibility to provide, where applicable, public notice and hearing before acting on an action, regulation, or permit.

**21676. Review of Local General Plans**

- (a) Each local agency whose general plan includes areas covered by an airport land use compatibility plan shall, by July 1, 1983, submit a copy of its plan or specific plans to the airport land use commission. The commission shall determine by August 31, 1983, whether the plan or plans are consistent or inconsistent with the airport land use compatibility plan. If the plan or plans are inconsistent with the airport land use compatibility plan, the local agency shall be notified and that local agency shall have another hearing to reconsider its airport land use compatibility plans. The local agency may propose to overrule the commission after the hearing by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670. At least 45 days prior to the decision to overrule the commission, the local agency governing body shall provide the commission and the division a copy of the proposed decision and findings. The commission and the division may provide comments to the local agency governing body within 30 days of receiving the proposed decision and findings. If the commission or the

division's comments are not available within this time limit, the local agency governing body may act without them. The comments by the division or the commission are advisory to the local agency governing body. The local agency governing body shall include comments from the commission and the division in the final record of any final decision to overrule the commission, which may only be adopted by a two-thirds vote of the governing body.

- (b) Prior to the amendment of a general plan or specific plan, or the adoption or approval of a zoning ordinance or building regulation within the planning boundary established by the airport land use commission pursuant to Section 21675, the local agency shall first refer the proposed action to the commission. If the commission determines that the proposed action is inconsistent with the commission's plan, the referring agency shall be notified. The local agency may, after a public hearing, propose to overrule the commission by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670. At least 45 days prior to the decision to overrule the commission, the local agency governing body shall provide the commission and the division a copy of the proposed decision and findings. The commission and the division may provide comments to the local agency governing body within 30 days of receiving the proposed decision and findings. If the commission or the division's comments are not available within this time limit, the local agency governing body may act without them. The comments by the division or the commission are advisory to the local agency governing body. The local agency governing body shall include comments from the commission and the division in the final record of any final decision to overrule the commission, which may only be adopted by a two-thirds vote of the governing body.
- (c) Each public agency owning any airport within the boundaries of an airport land use compatibility plan shall, prior to modification of its airport master plan, refer any proposed change to the airport land use commission. If the commission determines that the proposed action is inconsistent with the commission's plan, the referring agency shall be notified. The public agency may, after a public hearing, propose to overrule the commission by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article stated in Section 21670. At least 45 days prior to the decision to overrule the commission, the local agency governing body shall provide the commission and the division a copy of the proposed decision and findings. The commission and the division may

provide comments to the local agency governing body within 30 days of receiving the proposed decision and findings. If the commission or the division's comments are not available within this time limit, the local agency governing body may act without them. The comments by the division or the commission are advisory to the local agency governing body. The local agency governing body shall include comments from the commission and the division in the final record of any final decision to overrule the commission, which may only be adopted by a two-thirds vote of the governing body.

- (d) Each commission determination pursuant to subdivision (b) or (c) shall be made within 60 days from the date of referral of the proposed action. If a commission fails to make the determination within that period, the proposed action shall be deemed consistent with the airport land use compatibility plan.

#### **21676.5. Review of Local Plans**

- (a) If the commission finds that a local agency has not revised its general plan or specific plan or overruled the commission by a two-thirds vote of its governing body after making specific findings that the proposed action is consistent with the purposes of this article as stated in Section 21670, the commission may require that the local agency submit all subsequent actions, regulations, and permits to the commission for review until its general plan or specific plan is revised or the specific findings are made. If, in the determination of the commission, an action, regulation, or permit of the local agency is inconsistent with the airport land use compatibility plan, the local agency shall be notified and that local agency shall hold a hearing to reconsider its plan. The local agency may propose to overrule the commission after the hearing by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of this article as stated in Section 21670. At least 45 days prior to the decision to overrule the commission, the local agency governing body shall provide the commission and the division a copy of the proposed decision and findings. The commission and the division may provide comments to the local agency governing body within 30 days of receiving the proposed decision and findings. If the commission or the division's comments are not available within this time limit, the local agency governing body may act without them. The comments by the division or the commission are advisory to the local agency governing body. The local agency governing body shall include comments from the commission and the division in the final record of any final decision to

overrule the commission, which may only be adopted by a two-thirds vote of the governing body.

- (b) Whenever the local agency has revised its general plan or specific plan or has overruled the commission pursuant to subdivision (a), the proposed action of the local agency shall not be subject to further commission review, unless the commission and the local agency agree that individual projects shall be reviewed by the commission.

**21677. Marin County Override Provisions**

Notwithstanding the two-thirds vote required by Section 21676, any public agency in the County of Marin may overrule the Marin County Airport Land Use Commission by a majority vote of its governing body. At least 45 days prior to the decision to overrule the commission, the public agency governing body shall provide the commission and the division a copy of the proposed decision and findings. The commission and the division may provide comments to the public agency governing body within 30 days of receiving the proposed decision and findings. If the commission or the division's comments are not available within this time limit, the public agency governing body may act without them. The comments by the division or the commission are advisory to the public governing body. The public agency governing body shall include comments from the commission and the division in the public record of the final decision to overrule the commission, which may be adopted by a majority vote of the governing body.

**21678. Airport Owner's Immunity**

With respect to a publicly owned airport that a public agency does not operate, if the public agency pursuant to Section 21676 or 21676.5 or 21677 overrules a commission's action or recommendation, the operator of the airport shall be immune from liability for damages to property or personal injury caused by or resulting directly or indirectly from the public agency's decision to overrule the commission's action or recommendation.

**21679. Court Review**

- (a) In any county in which there is no airport land use commission or other body designated to assume the responsibilities of an airport land use commission, or in which the commission or other designated body has not adopted an airport land use compatibility plan, an interested party may initiate proceedings in a court of competent jurisdiction to postpone the effective date of a zoning change, a zoning variance, the issuance of a permit, or the adoption of a regulation by a local agency, that directly affects the use of land within one mile of the boundary of a public airport within the county.

- (b) The court may issue an injunction which postpones the effective date of the zoning change, zoning variance, permit, or regulation until the governing body of the local agency which took the action does one of the following:
  - (1) In the case of an action that is a legislative act, adopts a resolution declaring that the proposed action is consistent with the purposes of this article stated in Section 21670.
  - (2) In the case of an action that is not a legislative act, adopts a resolution making findings based on substantial evidence in the record that the proposed action is consistent with the purposes of this article stated in Section 21670.
  - (3) Rescinds the action.
  - (4) Amends its action to make it consistent with the purposes of this article stated in Section 21670, and complies with either paragraph (1) or (2) of this subdivision, whichever is applicable.
- (c) The court shall not issue an injunction pursuant to subdivision (b) if the local agency which took the action demonstrates that the general plan and any applicable specific plan of the agency accomplishes the purposes of an airport land use compatibility plan as provided in Section 21675.
- (d) An action brought pursuant to subdivision (a) shall be commenced within 30 days of the decision or within the appropriate time periods set by Section 21167 of the Public Resources Code, whichever is longer.
- (e) If the governing body of the local agency adopts a resolution pursuant to subdivision (b) with respect to a publicly owned airport that the local agency does not operate, the operator of the airport shall be immune from liability for damages to property or personal injury from the local agency's decision to proceed with the zoning change, zoning variance, permit, or regulation.
- (f) As used in this section, "interested party" means any owner of land within two miles of the boundary of the airport or any organization with a demonstrated interest in airport safety and efficiency.

**21679.5. Deferral of Court Review**

- (a) Until June 30, 1991, no action pursuant to Section 21679 to postpone the effective date of a zoning change, a zoning variance, the issuance of a

permit, or the adoption of a regulation by a local agency, directly affecting the use of land within one mile of the boundary or a public airport, shall be commenced in any county in which the commission or other designated body has not adopted an airport land use plan, but is making substantial progress toward the completion of the airport land use compatibility plan.

- (b) If a commission has been prevented from adopting the comprehensive land use plan by June 30, 1991, or if the adopted plan could not become effective because of a lawsuit involving the adoption of the plan, the June 30, 1991 date in subdivision (a) shall be extended by the period of time during which the lawsuit was pending in a court of competent jurisdiction.
- (c) Any action pursuant to Section 21679 commenced prior to January 1, 1990, in a county in which the commission or other designated body has not adopted an airport land use compatibility plan, but is making substantial progress toward the completion of the airport land use compatibility plan, which has not proceeded to final judgment, shall be held in abeyance until June 30, 1991. If the commission or other designated body adopts an airport land use compatibility plan on or before June 30, 1991, the action shall be dismissed. If the commission or other designated body does not adopt an airport land use plan on or before June 30, 1991, the plaintiff or plaintiffs may proceed with the action.
- (d) An action to postpone the effective date of a zoning change, a zoning variance, the issuance of a permit, or the adoption of a regulation by a local agency, directly affecting the use of land within one mile of the boundary of a public airport for which an airport land use compatibility plan has not been adopted by June 30, 1991, shall be commenced within 30 days of June 30, 1991, or within 30 days of the decision by the local agency, or within the appropriate time periods set by Section 21167 of the Public Resources Code, whichever date is later.



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**PLANNING AND ZONING LAW  
GOVERNMENT CODE  
Title 5—Local Agencies  
Division 1—Cities and Counties  
Chapter 2—Public Property  
Article 6.5—Airport Approaches Zoning Law**

**50485.**

This article shall be known and may be cited as the “Airport Approaches Zoning Law.”

**50485.1.**

As used in this article, unless the context otherwise requires:

“Airport” means any area of land or water designed and set aside for the landing and taking off of aircraft and utilized or to be utilized in the interest of the public for such purposes.

“Airport hazard” means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at an airport or is otherwise hazardous to such landing or taking off of aircraft.

“Airport hazard area” means any area of land or water upon which an airport hazard might be established if not prevented as provided in this article.

“City or county” means any city, county, or city and county.

“Person” means any individual, firm, co-partnership, corporation, company, association, joint stock association, city or county, or district, and includes any trustee, receiver, or assignee.

“Structure” means any object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead lines.

“Tree” means any object of natural growth.

**50485.2.**

It is hereby found that an airport hazard endangers the lives and property of users of the airport and of occupants of land in its vicinity and also, if of the obstruction type, in effect reduces the size of the area available for the landing, taking off and maneuvering of the aircraft, thus tending to destroy or impair the utility of the airport and the public investment therein. Accordingly, it is hereby declared:

(a) that the creation or establishment of an airport hazard is a public nuisance and an injury to the community served by the airport in question; and (b) that it is therefore

necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of airport hazards be prevented by appropriate exercise of the police power or the authority conferred by Article 2.6 (commencing with Section 21652) of Part 1 of Division 9 of the Public Utilities Code. It is further declared that both the prevention of the creation or establishment of airport hazards and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which a city or county may raise and expend public funds and acquire land or property interests therein.

**50485.3.**

In order to prevent the creation or establishment of airport hazards, every city or county having an airport hazard area within its territorial limits may adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations for such airport hazard area, which regulations may divide such area into zones, and, within such zones, specify the land uses permitted and regulate and restrict the height to which structures and trees may be erected or allowed to grow.

**50485.4.**

In the event that a city or county has adopted, or hereafter adopts, a comprehensive zoning ordinance regulating, among other things, the height of buildings, any airport zoning regulations applicable to the same area or portion thereof may be incorporated in and made a part of such comprehensive zoning regulations, and be administered and enforced in connection therewith.

In the event of conflict between any airport zoning regulations adopted under this article and any other regulations applicable to the same area whether the conflict be with respect to the height of structures or trees, the use of land, or any other matter, and whether such other regulations were adopted by the city or county which adopted the airport zoning regulations or by some other city or county, the more stringent limitation or requirement shall govern and prevail.

**50485.5.**

No airport zoning regulations shall be adopted, amended, or changed under this article except by action of the legislative body of the city or county in question after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. Notice of the hearing shall be published pursuant to Section 6066 in an official paper, or a paper of general circulation, in the city or county in which is located the airport hazard area to be zoned.

**50485.6.**

Prior to the initial zoning of any airport hazard area under this article, the city or county which is to adopt the regulations shall appoint a commission, to be known as the airport zoning commission, to recommend the boundaries of the various zones

to be established and the regulations to be adopted therefor. Such commission shall make a preliminary report and hold public hearings thereon before submitting its final report, and the legislative body of the city or county shall not hold its public hearings or take other action until it has received the final report of such commission. Where a city or county planning commission already exists, it shall be appointed as the airport zoning commission.

**50485.7.**

All airport zoning regulations adopted under this article shall be reasonable and none shall impose any requirement or restriction which is not reasonably necessary to effectuate the purposes of this article. In determining what regulations it may adopt, each city or county shall consider, among other things, the character of the flying operations expected to be conducted at the airport, the nature of the terrain within the airport hazard area, the character of the neighborhood, and the uses to which the property to be zoned is put and adaptable.

**50485.8.**

No airport zoning regulations adopted under this article shall require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations when adopted or amended, or otherwise interfere with the continuance of any nonconforming use, except as provided in Section 50485.10.

**50485.9.**

All airport zoning regulations adopted under this article shall provide for the administration and enforcement of such regulations by an administrative agency which may be an agency created by such regulations or any official, board, or other existing agency of the city or county adopting the regulations, if satisfactory to that city or county. The duties of any administrative agency designated pursuant to this article shall include that of hearing and deciding all applications for permits and variances under Section 50485.10.

**50485.10.**

Any airport zoning regulations shall provide that before any nonconforming structure or tree may be replaced, substantially altered or repaired, rebuilt, allowed to grow higher, or replanted, a permit must be secured from the administrative agency authorized to administer and enforce the regulations, authorizing such replacement, change or repair. No permit shall be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or tree or nonconforming use to be made or become higher or become a greater hazard to air navigation than it was when the applicable regulation was adopted or than it is when the application for a permit is made. Except as provided herein, all applications for permits shall be granted. No such permit shall be required to make maintenance repairs to or to replace parts of existing structures which do not enlarge or increase the height of the existing structure.

Any person desiring to erect any structure, or increase the height of any structure, or permit the growth of any tree, or otherwise use his property in violation of airport zoning regulations adopted under this article, may apply to the administrative agency for a variance from the zoning regulations in question. Such variances shall be allowed where a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and the relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of the regulations and this article; provided, that any variance may be allowed subject to any reasonable conditions that the administrative agency may deem necessary to effectuate the purpose of this article.

In granting any permit or variance under this section, the administrative agency may, if it deems such action advisable to effectuate the purposes of this article and reasonable in the circumstances, so condition such permit or variance as to require the owner of the structure or tree in question to permit the city and county, at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

**50485.11.**

Any person aggrieved or taxpayer affected by any decision of the administrative agency or of any governing body of a city or county, may petition a court for a review of the matter in accordance with law.

The court shall have exclusive jurisdiction to affirm, modify, or set aside the decision brought up for review, in whole or in part, and if need be, to order further proceedings by the administrative agency. The findings of fact of the administrative agency, if supported by substantial evidence, shall be accepted by the court as conclusive, and no objection to a decision of the administrative agency shall be considered by the court unless such objection shall have been urged before the administrative agency, or, if it was not so urged, unless there were reasonable grounds for failure to do so.

In any case in which airport zoning regulations adopted under this article, although generally reasonable, are held by a court to interfere with the use or enjoyment of a particular structure or parcel of land to such an extent, or to be so onerous in their application to such a structure or parcel of land, as to constitute a taking or deprivation of that property in violation of the Constitution of this State or the Constitution of the United States, such holding shall not affect the application of such regulations to other structures and parcels of land.

**50485.12.**

Each violation of this article or of any regulations, orders, or rulings promulgated or made pursuant to this article, shall constitute a misdemeanor. In addition, the city or county adopting zoning regulations under this article may institute in any court of competent jurisdiction an action to prevent, restrain, correct or abate any violation

of this article, or of airport zoning regulations adopted under this article, or of any order or ruling made in connection with their administration or enforcement, and the court shall adjudge to the plaintiff such relief, by way of injunction (which may be mandatory) or otherwise, as may be proper under all the facts and circumstances of the case, in order fully to effectuate the purpose of this article and of the regulations adopted and orders and rulings made pursuant thereto.

**50485.14.**

Neither this article nor anything expressed in it is intended to be or is to be construed as a denial of the power of local governing bodies and agencies to provide for zoning regulations pursuant to Article XI, Section 11, of the Constitution.

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**PLANNING AND ZONING LAW  
GOVERNMENT CODE  
Title 7—Planning and Land Use  
Division 1—Planning and Zoning  
Chapter 3—Local Planning  
Article 5—Authority for and Scope of General Plans  
(excerpts)**

**65302.3. General and Applicable Specific Plans; Consistency with Airport Land Use Plans; Amendment; Nonconcurrence Findings**

- (a) The general plan, and any applicable specific plan prepared pursuant to Article 8 (commencing with Section 65450), shall be consistent with the plan adopted or amended pursuant to Section 21675 of the Public Utilities Code.
- (b) The general plan, and any applicable specific plan, shall be amended, as necessary, within 180 days of any amendment to the plan required under Section 21675 of the Public Utilities Code.
- (c) If the legislative body does not concur with any of the provisions of the plan required under Section 21675 of the Public Utilities Code, it may satisfy the provisions of this section by adopting findings pursuant to Section 21676 of the Public Utilities Code.
- (d) In each county where an airport land use commission does not exist, but where there is a military airport, the general plan, and any applicable specific plan prepared pursuant to Article 8 (commencing with Section 65450), shall be consistent with the safety and noise standards in the Air Installation Compatible Use Zone prepared for that military airport.



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**PLANNING AND ZONING LAW  
GOVERNMENT CODE  
Title 7—Planning and Land Use  
Division 1—Planning and Zoning  
Chapter 4.5—Review and Approval of Development Projects  
Article 3—Application for Development Projects  
(excerpts)**

*Note: The following government code sections are referenced in Section 21675.2(c) of the ALUC statutes.*

**65943. Completeness of Application; Determination; Time; Specification of Parts not Complete and Manner of Completion**

- (a) Not later than 30 calendar days after any public agency has received an application for a development project, the agency shall determine in writing whether the application is complete and shall immediately transmit the determination to the applicant for the development project. If the written determination is not made within 30 days after receipt of the application, and the application includes a statement that it is an application for a development permit, the application shall be deemed complete for purposes of this chapter. Upon receipt of any resubmittal of the application, a new 30-day period shall begin, during which the public agency shall determine the completeness of the application. If the application is determined not to be complete, the agency's determination shall specify those parts of the application which are incomplete and shall indicate the manner in which they can be made complete, including a list and thorough description of the specific information needed to complete the application. The applicant shall submit materials to the public agency in response to the list and description.
- (b) Not later than 30 calendar days after receipt of the submitted materials, the public agency shall determine in writing whether they are complete and shall immediately transmit that determination to the applicant. If the written determination is not made within that 30-day period, the application together with the submitted materials shall be deemed complete for the purposes of this chapter.
- (c) If the application together with the submitted materials are determined not to be complete pursuant to subdivision (b), the public agency shall provide a process for the applicant to appeal that decision in writing to the governing body of the agency or, if there is no governing body, to the director of the agency, as provided by that agency. A city or county

shall provide that the right of appeal is to the governing body or, at their option, the planning commission, or both.

There shall be a final written determination by the agency of the appeal not later than 60 calendar days after receipt of the applicant's written appeal. The fact that an appeal is permitted to both the planning commission and to the governing body does not extend the 60-day period. Notwithstanding a decision pursuant to subdivision (b) that the application and submitted materials are not complete, if the final written determination on the appeal is not made within that 60-day period, the application with the submitted materials shall be deemed complete for the purposes of this chapter.

- (d) Nothing in this section precludes an applicant and a public agency from mutually agreeing to an extension of any time limit provided by this section.
- (e) A public agency may charge applicants a fee not to exceed the amount reasonably necessary to provide the service required by this section. If a fee is charged pursuant to this section, the fee shall be collected as part of the application fee charged for the development permit.

**65943.5.**

- (a) Notwithstanding any other provision of this chapter, any appeal pursuant to subdivision (c) of Section 65943 involving a permit application to a board, office, or department within the California Environmental Protection Agency shall be made to the Secretary for Environmental Protection.
- (b) Notwithstanding any other provision of this chapter, any appeal pursuant to subdivision (c) of Section 65943 involving an application for the issuance of an environmental permit from an environmental agency shall be made to the Secretary for Environmental Protection under either of the following circumstances:
  - (1) The environmental agency has not adopted an appeals process pursuant to subdivision (c) of Section 65943.
  - (2) The environmental agency declines to accept an appeal for a decision pursuant to subdivision (c) of Section 65943.
- (c) For purposes of subdivision (b), "environmental permit" has the same meaning as defined in Section 72012 of the Public Resources Code, and "environmental agency" has the same meaning as defined in Section

71011 of the Public Resources Code, except that “environmental agency” does not include the agencies described in subdivisions (c) and (h) of Section 71011 of the Public Resources Code.

**65944. Acceptance of Application as Complete; Requests for Additional Information; Restrictions; Clarification, Amplification, Correction, etc.; Prior to Notice of Necessary Information**

- (a) After a public agency accepts an application as complete, the agency shall not subsequently request of an applicant any new or additional information which was not specified in the list prepared pursuant to Section 65940. The agency may, in the course of processing the application, request the applicant to clarify, amplify, correct, or otherwise supplement the information required for the application.
- (b) The provisions of subdivision (a) shall not be construed as requiring an applicant to submit with his or her initial application the entirety of the information which a public agency may require in order to take final action on the application. Prior to accepting an application, each public agency shall inform the applicant of any information included in the list prepared pursuant to Section 65940 which will subsequently be required from the applicant in order to complete final action on the application.
- (c) This section shall not be construed as limiting the ability of a public agency to request and obtain information which may be needed in order to comply with the provisions of Division 13 (commencing with Section 21000) of the Public Resources Code.
- (d) (1) After a public agency accepts an application as complete, and if the project applicant has identified that the proposed project is located within 1,000 feet of a military installation or within special use airspace or beneath a low-level flight path in accordance with Section 65940, the public agency shall provide a copy of the complete application to any branch of the United States Armed Forces that has provided the Office of Planning and Research with a single California mailing address within the state for the delivery of a copy of these applications. This subdivision shall apply only to development applications submitted to a public agency 30 days after the Office of Planning and Research has notified cities, counties, and cities and counties of the availability of Department of Defense information on the Internet pursuant to subdivision (d) of Section 65940.  
  
(2) Except for a project within 1,000 feet of a military installation, the public agency is not required to provide a copy of the application if the

project is located entirely in an “urbanized area.” An urbanized area is any urban location that meets the definition used by the United State Department of Commerce’s Bureau of Census for “urban” and includes locations with core census block groups containing at least 1,000 people per square mile and surrounding census block groups containing at least 500 people per square mile.

(e) Upon receipt of a copy of the application as required in subdivision (d), any branch of the United States Armed Forces may request consultation with the public agency and the project applicant to discuss the effects of the proposed project on military installations, low-level flight paths, or special use airspace, and potential alternatives and mitigation measures.

(f) (1) Subdivisions (d), (e), and (f) as these relate to low-level flight paths, special use airspace, and urbanized areas shall not be operative until the United States Department of Defense provides electronic maps of low-level flight paths, special use airspace, and military installations, at a scale and in an electronic format that is acceptable to the Office of Planning and Research.

(2) Within 30 days of a determination by the Office of Planning and Research that the information provided by the Department of Defense is sufficient and in an acceptable scale and format, the office shall notify cities, counties, and cities and counties of the availability of the information on the Internet. Cities, counties, and cities and counties shall comply with subdivision (d) within 30 days of receiving this notice from the office.

**65945. Notice of Proposal to Adopt or Amend Certain Plans or Ordinances by City or County, Fee; Subscription to Periodically Updated Notice as Alternative, Fee**

(a) At the time of filing an application for a development permit with a city or county, the city or county shall inform the applicant that he or she may make a written request to retrieve notice from the city or county of a proposal to adopt or amend any of the following plans or ordinances:

(1) A general plan.

(2) A specific plan.

(3) A zoning ordinance.

(4) An ordinance affecting building permits or grading permits.

The applicant shall specify, in the written request, the types of proposed action for which notice is requested. Prior to taking any of those actions, the city or county shall give notice to any applicant who has requested notice of the type of action proposed and whose development project is pending before the city or county if the city or county determines that the proposal is reasonably related to the applicant's request for the development permit. Notice shall be given only for those types of actions which the applicant specifies in the request for notification.

The city or county may charge the applicant for a development permit, to whom notice is provided pursuant to this subdivision, a reasonable fee not to exceed the actual cost of providing that notice. If a fee is charged pursuant to this subdivision, the fee shall be collected as part of the application fee charged for the development permit.

- (b) As an alternative to the notification procedure prescribed by subdivision (a), a city or county may inform the applicant at the time of filing an application for a development permit that he or she may subscribe to a periodically updated notice or set of notices from the city or county which lists pending proposals to adopt or amend any of the plans or ordinances specified in subdivision (a), together with the status of the proposal and the date of any hearings thereon which have been set. Only those proposals which are general, as opposed to parcel-specific in nature, and which the city or county determines are reasonably related to requests for development permits, need be listed in the notice. No proposals shall be required to be listed until such time as the first public hearing thereon has been set. The notice shall be updated and mailed at least once every six weeks; except that a notice need not be updated and mailed until a change in its contents is required.

The city or county may charge the applicant for a development permit, to whom notice is provided pursuant to this subdivision, a reasonable fee not to exceed the actual cost of providing that notice, including the costs of updating the notice, for the length of time the applicant requests to be sent the notice or notices.

**65945.3. Notice of Proposal to Adopt or Amend Rules or Regulations Affecting Issuance of Permits by Local Agency other than City or County; Fee**

At the time of filing an application for a development permit with a local agency, other than a city or county, the local agency shall inform the applicant that he or she may make a written request to receive notice of any proposal to adopt or amend a rule or regulation affecting the issuance of development permits.

Prior to adopting or amending any such rule or regulation, the local agency shall give notice to any applicant who has requested such notice and whose development project is pending before the agency if the local agency determines that the proposal is reasonably related to the applicant's request for the development permit.

The local agency may charge the applicant for a development permit, to whom notice is provided pursuant to this section, a reasonable fee not to exceed the actual cost of providing that notice. If a fee is charged pursuant to this section, the fee shall be collected as part of the application fee charged for the development permit.

**65945.5. Notice of Proposal to Adopt or Amend Regulation Affecting Issuance of Permits and Which Implements Statutory Provision by State Agency**

At the time of filing an application for a development permit with a state agency, the state agency shall inform the applicant that he or she may make a written request to receive notice of any proposal to adopt or amend a regulation affecting the issuance of development permits and which implements a statutory provision.

Prior to adopting or amending any such regulation, the state agency shall give notice to any applicant who has requested such notice and whose development project is pending before the state agency if the state agency determines that the proposal is reasonably related to the applicant's request for the development permit.

**65945.7. Actions, Inactions, or Recommendations Regarding Ordinances, Rules or Regulations; Invalidity or Setting Aside Ground of Error Only if Prejudicial**

No action, inaction, or recommendation regarding any ordinance, rule, or regulation subject to this Section 65945, 65945.3, or 65945.5 by any legislative body, administrative body, or the officials of any state or local agency shall be held void or invalid or be set aside by any court on the ground of any error, irregularity, informality, neglect, or omission (hereinafter called "error") as to any matter pertaining to notices, records, determinations, publications, or any matters of procedure whatever, unless after an examination of the entire case, including evidence, the court shall be of the opinion that the error complained of was prejudicial, and that by reason of such error that party complaining or appealing sustained and suffered substantial injury, and that a different result would have been probable if such error had not occurred or existed. There shall be no presumption that error is prejudicial or that injury was done if error is shown.

**65946. [Replaced by AB2351 Statutes of 1993]**

**PLANNING AND ZONING LAW  
GOVERNMENT CODE  
Title 7—Planning and Land Use  
Division 2—Subdivisions  
Chapter 3—Procedure  
Article 3—Review of Tentative Map by Other Agencies  
(excerpts)**

**66455.9.**

Whenever there is consideration of an area within a development for a public school site, the advisory agency shall give the affected districts and the State Department of Education written notice of the proposed site. The written notice shall include the identification of any existing or proposed runways within the distance specified in Section 17215 of the Education Code. If the site is within the distance of an existing or proposed airport runway as described in Section 17215 of the Education Code, the department shall notify the State Department of Transportation as required by the section and the site shall be investigated by the State Department of Transportation as required by Section 17215.



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**EDUCATION CODE**  
**Title 1—General Education Code Provisions**  
**Division 1—General Education Code Provisions**  
**Part 10.5—School Facilities**  
**Chapter 1—School sites**  
**Article 1—General Provisions**  
**(excerpt)**

**17215.**

- (a) In order to promote the safety of pupils, comprehensive community planning, and greater educational usefulness of school sites, before acquiring title to or leasing property for a new school site, the governing board of each school district, including any district governed by a city board of education, or a charter school, shall give the State Department of Education written notice of the proposed acquisition or lease and shall submit any information required by the State Department of Education if the site is within two miles, measured by air line, of that point on an airport runway or a potential runway included in an airport master plan that is nearest to the site.
- (b) Upon receipt of the notice required pursuant to subdivision (a), the State Department of Education shall notify the Department of Transportation in writing of the proposed acquisition or lease. If the Department of Transportation is no longer in operation, the State Department of Education shall, in lieu of notifying the Department of Transportation, notify the United States Department of Transportation or any other appropriate agency, in writing, of the proposed acquisition or lease for the purpose of obtaining from the department or other agency any information or assistance that it may desire to give.
- (c) The Department of Transportation shall investigate the site and, within 30 working days after receipt of the notice, shall submit to the State Department of Education a written report of its findings including recommendations concerning acquisition or lease of the site. As part of the investigation, the Department of Transportation shall give notice thereof to the owner and operator of the airport who shall be granted the opportunity to comment upon the site. The Department of Transportation shall adopt regulations setting forth the criteria by which a site will be evaluated pursuant to this section.
- (d) The State Department of Education shall, within 10 days of receiving the Department of Transportation's report, forward the report to the governing board of the school district or charter school. The governing

board or charter school may not acquire title to or lease the property until the report of the Department of Transportation has been received. If the report does not favor the acquisition or lease of the property for a school site or an addition to a present school site, the governing board or charter school may not acquire title to or lease the property. If the report does favor the acquisition or lease of the property for a school site or an addition to a present school site, the governing board or charter school shall hold a public hearing on the matter prior to acquiring or leasing the site.

- (e) If the Department of Transportation's recommendation does not favor acquisition or lease of the proposed site, state funds or local funds may not be apportioned or expended for the acquisition or lease of that site, construction of any school building on that site, or for the expansion of any existing site to include that site.
- (f) This section does not apply to sites acquired prior to January 1, 1966, nor to any additions or extensions to those sites.

**EDUCATION CODE**  
**Title 3—Postsecondary Education**  
**Division 7—Community Colleges**  
**Part 49—Community Colleges, Education Facilities**  
**Chapter 1—School Sites**  
**Article 2—School Sites**  
**(excerpts)**

**81033. Investigation: Geologic and Soil Engineering Studies; Airport in Proximity**

- (a) To promote the safety of students, comprehensive community planning, and greater educational usefulness of community college sites, the governing board of each community college district, if the proposed site is within two miles, measured by air line, of that point on an airport runway, or a runway proposed by an airport master plan, which is nearest the site and excluding them if the property is not so located, before acquiring title to property for a new community college site or for an addition to a present site, shall give the board of governors notice in writing of the proposed acquisition and shall submit any information required by the board of governors.

Immediately after receiving notice of the proposed acquisition of property which is within two miles, measured by air line, of that point on an airport runway, or a runway proposed by an airport master plan, which is nearest the site, the board of governors shall notify the Division of Aeronautics of the Department of Transportation, in writing, of the proposed acquisition. The Division of Aeronautics shall make an investigation and report to the board of governors within 30 working days after receipt of the notice. If the Division of Aeronautics is no longer in operation, the board of governors shall, in lieu of notifying the Division of Aeronautics, notify the Federal Aviation Administration or any other appropriate agency, in writing, of the proposed acquisition for the purpose of obtaining from the authority or other agency such information or assistance as it may desire to give.

The board of governors shall investigate the proposed site and within 35 working days after receipt of the notice shall submit to the governing board a written report and its recommendations concerning acquisition of the site. The governing board shall not acquire title to the property until the report of the board of governors has been received. If the report does not favor the acquisition of the property for a community college site or an addition to a present community college site, the governing board shall not acquire title to the property until 30 days after

the department's report is received and until the board of governors' report has been read at a public hearing duly called after 10 days' notice published once in a newspaper of general circulation within the community college district, or if there is no such newspaper, then in a newspaper of general circulation within the county in which the property is located.

- (b) If, with respect to a proposed site located within two miles of an operative airport runway, the report of the board of governors submitted to a community college district governing board under subdivision (c) does not favor the acquisition of the site on the sole or partial basis of the unfavorable recommendation of the Division of Aeronautics of the Department of Transportation, no state agency or officer shall grant, apportion, or allow to such community college district for expenditure in connection with that site, any state funds otherwise made available under any state law whatever for a community college site acquisition or college building construction, or for expansion of existing sites and buildings, and no funds of the community college district or of the county in which the district lies shall be expended for such purposes; provided that provisions of this section shall not be applicable to sites acquired prior to January 1, 1966, nor any additions or extensions to such sites.

If the recommendations of the Division of Aeronautics are unfavorable, such recommendations shall not be overruled without the express approval of the board of governors and the State Allocation Board.

**CALIFORNIA ENVIRONMENTAL QUALITY ACT STATUTES**  
**PUBLIC RESOURCES CODE**  
**Division 13—Environmental Quality**  
**Chapter 2.6—General**  
**(excerpts)**

**21096. Airport Planning**

- (a) If a lead agency prepares an environmental impact report for a project situated within airport comprehensive land use plan boundaries, or, if a comprehensive land use plan has not been adopted, for a project within two nautical miles of a public airport or public use airport, the Airport Land Use Planning Handbook published by the Division of Aeronautics of the Department of Transportation, in compliance with Section 21674.5 of the Public Utilities Code and other documents, shall be utilized as technical resources to assist in the preparation of the environmental impact report as the report relates to airport-related safety hazards and noise problems.
  
- (b) A lead agency shall not adopt a negative declaration for a project described in subdivision (a) unless the lead agency considers whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.

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**BUSINESS AND PROFESSIONS CODE**  
**Division 4—Real Estate**  
**Part 2—Regulation of Transactions**  
**Chapter 1—Subdivided Lands**  
**Article 2—Investigation, Regulation and Report**  
**(excerpts)**

**11010.**

- (a) Except as otherwise provided pursuant to subdivision (c) or elsewhere in this chapter, any person who intends to offer subdivided lands within this state for sale or lease shall file with the Department of Real Estate an application for a public report consisting of a notice of intention and a completed questionnaire on a form prepared by the department.
- (b) The notice of intention shall contain the following information about the subdivided lands and the proposed offering:

[Sub-Sections (1) through (12) omitted]

- (13) (A) The location of all existing airports, and of all proposed airports shown on the general plan of any city or county, located within two statute miles of the subdivision. If the property is located within an airport influence area, the following statement shall be included in the notice of intention:

**NOTICE OF AIRPORT IN VICINITY**

This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.

- (B) For purposes of this section, an “airport influence area,” also known as an “airport referral area,” is the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission.



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**CIVIL CODE**  
**Division 2—Property**  
**PART 4—Acquisition of Property**  
**Title 4—Transfer**  
**Chapter 2—Transfer of Real Property**  
**Article 1.7—Disclosure of Natural Hazards Upon Transfer of Residential**  
**Property**  
**(excerpts)**

**1103.**

- (a) Except as provided in Section 1103.1, this article applies to any transfer by sale, exchange, installment land sale contract, as defined in Section 2985, lease with an option to purchase, any other option to purchase, or ground lease coupled with improvements, of any real property described in subdivision (c), or residential stock cooperative, improved with or consisting of not less than one nor more than four dwelling units.
- (b) Except as provided in Section 1103.1, this article shall apply to a resale transaction entered into on or after January 1, 2000, for a manufactured home, as defined in Section 18007 of the Health and Safety Code, that is classified as personal property intended for use as a residence, or a mobile home, as defined in Section 18008 of the Health and Safety Code, that is classified as personal property intended for use as a residence, if the real property on which the manufactured home or mobile home is located is real property described in subdivision (c).
- (c) This article shall apply to the transactions described in subdivisions (a) and (b) only if the transferor or his or her agent is required by one or more of the following to disclose the property's location within a hazard zone:
  - (1) A person who is acting as an agent for a transferor of real property that is located within a special flood hazard area (any type Zone "A" or "V") designated by the Federal Emergency Management Agency, or the transferor if he or she is acting without an agent, shall disclose to any prospective transferee the fact that the property is located within a special flood hazard area if either:
    - (A) The transferor, or the transferor's agent, has actual knowledge that the property is within a special flood hazard area.

- (B) The local jurisdiction has compiled a list, by parcel, of properties that are within the special flood hazard area and a notice has been posted at the offices of the county recorder, county assessor, and county planning agency that identifies the location of the parcel list.
- (2) ... is located within an area of potential flooding ... shall disclose to any prospective transferee the fact that the property is located within an area of potential flooding ...
- (3) ... is located within a very high fire hazard severity zone, designated pursuant to Section 51178 of the Public Resources Code ... shall disclose to any prospective transferee the fact that the property is located within a very high fire hazard severity zone and is subject to the requirements of Section 51182 ...
- (4) ... is located within an earthquake fault zone, designated pursuant to Section 2622 of the Public Resources Code ... shall disclose to any prospective transferee the fact that the property is located within a delineated earthquake fault zone
- (5) ... is located within a seismic hazard zone, designated pursuant to Section 2696 of the Public Resources Code ... shall disclose to any prospective transferee the fact that the property is located within a seismic hazard zone
- (6) ... is located within a state responsibility area determined by the board, pursuant to Section 4125 of the Public Resources Code, shall disclose to any prospective transferee the fact that the property is located within a wildland area that may contain substantial forest fire risks and hazards and is subject to the requirements of Section 4291 ...
- (d) Any waiver of the requirements of this article is void as against public policy.

**1103.1.**

- (a) This article does not apply to the following transfers:
  - (1) Transfers pursuant to court order, including, but not limited to, transfers ordered by a probate court in administration of an estate, transfers pursuant to a writ of execution, transfers by any foreclosure sale, transfers by a trustee in bankruptcy, transfers by

eminent domain, and transfers resulting from a decree for specific performance.

- (2) Transfers to a mortgagee by a mortgagor or successor in interest who is in default, transfers to a beneficiary of a deed of trust by a trustor or successor in interest who is in default, transfers by any foreclosure sale after default, transfers by any foreclosure sale after default in an obligation secured by a mortgage, transfers by a sale under a power of sale or any foreclosure sale under a decree of foreclosure after default in an obligation secured by a deed of trust or secured by any other instrument containing a power of sale, or transfers by a mortgagee or a beneficiary under a deed of trust who has acquired the real property at a sale conducted pursuant to a power of sale under a mortgage or deed of trust or a sale pursuant to a decree of foreclosure or has acquired the real property by a deed in lieu of foreclosure.
  - (3) Transfers by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust.
  - (4) Transfers from one co-owner to one or more other co-owners.
  - (5) Transfers made to a spouse, or to a person or persons in the lineal line of consanguinity of one or more of the transferors.
  - (6) Transfers between spouses resulting from a judgment of dissolution of marriage or of legal separation of the parties or from a property settlement agreement incidental to that judgment.
  - (7) Transfers by the Controller in the course of administering Chapter 7 (commencing with Section 1500) of Title 10 of Part 3 of the Code of Civil Procedure.
  - (8) Transfers under Chapter 7 (commencing with Section 3691) or Chapter 8 (commencing with Section 3771) of Part 6 of Division 1 of the Revenue and Taxation Code.
  - (9) Transfers or exchanges to or from any governmental entity.
- (b) Transfers not subject to this article may be subject to other disclosure requirements, including those under Sections 8589.3, 8589.4, and 51183.5 of the Government Code and Sections 2621.9, 2694, and 4136 of the

Public Resources Code. In transfers not subject to this article, agents may make required disclosures in a separate writing.

**1103.2.**

- (a) The disclosures required by this article are set forth in, and shall be made on a copy of, the following Natural Hazard Disclosure Statement: [content omitted].
- (b) If an earthquake fault zone, seismic hazard zone, very high fire hazard severity zone, or wildland fire area map or accompanying information is not of sufficient accuracy or scale that a reasonable person can determine if the subject real property is included in a natural hazard area, the transferor or transferor's agent shall mark "Yes" on the Natural Hazard Disclosure Statement. The transferor or transferor's agent may mark "No" on the Natural Hazard Disclosure Statement if he or she attaches a report prepared pursuant to subdivision (c) of Section 1103.4 that verifies the property is not in the hazard zone. Nothing in this subdivision is intended to limit or abridge any existing duty of the transferor or the transferor's agents to exercise reasonable care in making a determination under this subdivision.

[Sub-Sections (c) through (h) omitted]

[Section 1103.3 omitted]

**1103.4.**

- (a) Neither the transferor nor any listing or selling agent shall be liable for any error, inaccuracy, or omission of any information delivered pursuant to this article if the error, inaccuracy, or omission was not within the personal knowledge of the transferor or the listing or selling agent, and was based on information timely provided by public agencies or by other persons providing information as specified in subdivision (c) that is required to be disclosed pursuant to this article, and ordinary care was exercised in obtaining and transmitting the information.
- (b) The delivery of any information required to be disclosed by this article to a prospective transferee by a public agency or other person providing information required to be disclosed pursuant to this article shall be deemed to comply with the requirements of this article and shall relieve the transferor or any listing or selling agent of any further duty under this article with respect to that item of information.

- (c) The delivery of a report or opinion prepared by a licensed engineer, land surveyor, geologist, or expert in natural hazard discovery dealing with matters within the scope of the professional's license or expertise, shall be sufficient compliance for application of the exemption provided by subdivision (a) if the information is provided to the prospective transferee pursuant to a request therefor, whether written or oral. In responding to that request, an expert may indicate, in writing, an understanding that the information provided will be used in fulfilling the requirements of Section 1103.2 and, if so, shall indicate the required disclosures, or parts thereof, to which the information being furnished is applicable. Where that statement is furnished, the expert shall not be responsible for any items of information, or parts thereof, other than those expressly set forth in the statement. In responding to the request, the expert shall determine whether the property is within an airport influence area as defined in subdivision (b) of Section 11010 of the Business and Professions Code. If the property is within an airport influence area, the report shall contain the following statement:

#### **NOTICE OF AIRPORT IN VICINITY**

This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.

[Remainder of Article 1.7 omitted]

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**CIVIL CODE**  
**Division 2, Part 4**  
**Title 6—Common Interest Developments**  
**Chapter 2—Governing Documents**  
**Article 1—Creation**  
**(excerpts)**

**1353.**

- (a) (1) A declaration, recorded on or after January 1, 1986, shall contain a legal description of the common interest development, and a statement that the common interest development is a community apartment project, condominium project, planned development, stock cooperative, or combination thereof. The declaration shall additionally set forth the name of the association and the restrictions on the use or enjoyment of any portion of the common interest development that are intended to be enforceable equitable servitudes. If the property is located within an airport influence area, a declaration, recorded after January 1, 2004, shall contain the following statement:

**NOTICE OF AIRPORT IN VICINITY**

This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.

- (2) For purposes of this section, an “airport influence area,” also known as an “airport referral area,” is the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission.
- (3) [Omitted]
- (4) The statement in a declaration acknowledging that a property is located in an airport influence area does not constitute a title defect, lien, or encumbrance.
- (b) The declaration may contain any other matters the original signator of the declaration or the owners consider appropriate.



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## **Appendix C**

### **Title 14 Code of Federal Regulations Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace**



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### TITLE 14 CODE OF FEDERAL REGULATIONS PART 77, SAFE, EFFICIENT USE AND PRESERVATION OF THE NAVIGABLE AIRSPACE

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## **Subpart A**

### **GENERAL**

#### **77.1 Purpose.**

This part establishes:

- (a) The requirements to provide notice to the FAA of certain proposed construction, or the alteration of existing structures;
- (b) The standards used to determine obstructions to air navigation, and navigational and communication facilities;
- (c) The process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment; and
- (d) The process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

#### **77.3 Definitions.**

For the purpose of this part:

“Nonprecision instrument runway” means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight in nonprecision instrument approach procedure has been approved, or planned, and for which no precision approach facilities are planned, or indicated on an FAA planning document or military service military airport planning document.

“Planned or proposed airport” is an airport that is the subject of at least one of the following documents received by the FAA:

- (1) Airport proposals submitted under 14 CFR Part 157.
- (2) Airport Improvement Program requests for aid.
- (3) Notices of existing airports where prior notice of the airport construction or alteration was not provided as required by 14 CFR Part 157.
- (4) Airport layout plans.
- (5) DOD proposals for airports used only by the U.S. Armed Forces.
- (6) DOD proposals on joint-use (civil-military) airports.

(7) Completed airport site selection feasibility study.

“Precision instrument runway” means a runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA approved airport layout plan; a military service approved military airport layout plan; any other FAA planning document, or military service military airport planning document.

“Public use airport” means an airport that is open to the general public with or without a prior request to use the airport.

“Seaplane base” is considered to be an airport only if its sea lanes are outlined by visual markers.

“Utility runway” means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less.

“Visual runway” means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, a military service approved military airport layout plan, or by any planning document submitted to the FAA by competent authority.

**Subpart B**  
**NOTICE REQUIREMENTS**

**77.5 Applicability.**

- (a) If you propose any construction or alteration described in §77.9, you must provide adequate notice to the FAA of that construction or alteration.
- (b) If requested by the FAA, you must also file supplemental notice before the start date and upon completion of certain construction or alterations that are described in §77.9.
- (c) Notice received by the FAA under this subpart is used to:
  - (1) Evaluate the effect of the proposed construction or alteration on safety in air commerce and the efficient use and preservation of the navigable airspace and of airport traffic capacity at public use airports;
  - (2) Determine whether the effect of proposed construction or alteration is a hazard to air navigation;
  - (3) Determine appropriate marking and lighting recommendations, using FAA Advisory Circular 70/7460-1, Obstruction Marking and Lighting;
  - (4) Determine other appropriate measures to be applied for continued safety of air navigation; and
  - (5) Notify the aviation community of the construction or alteration of objects that affect the navigable airspace, including the revision of charts, when necessary.

**77.7 Form and time of notice.**

- (a) If you are required to file notice under §77.9, you must submit to the FAA a completed FAA Form 7460-1, Notice of Proposed Construction or Alteration. FAA Form 7460-1 is available at FAA regional offices and on the Internet.
- (b) You must submit this form at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.
- (c) If you propose construction or alteration that is also subject to the licensing requirements of the Federal Communications Commission (FCC), you must submit notice to the FAA on or before the date that the application is filed with the FCC.



- (d) If you propose construction or alteration to an existing structure that exceeds 2,000 feet in height above ground level (AGL), the FAA presumes it to be a hazard to air navigation that results in an inefficient use of airspace. You must include details explaining both why the proposal would not constitute a hazard to air navigation and why it would not cause an inefficient use of airspace.
- (e) The 45-day advance notice requirement is waived if immediate construction or alteration is required because of an emergency involving essential public services, public health, or public safety. You may provide notice to the FAA by any available, expeditious means. You must file a completed FAA Form 7460-1 within 5 days of the initial notice to the FAA. Outside normal business hours, the nearest flight service station will accept emergency notices.

### **77.9 Construction or alteration requiring notice.**

If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

- (a) Any construction or alteration that is more than 200 feet AGL at its site.
- (b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:
  - (1) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 feet in actual length, excluding heliports.
  - (2) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 feet in actual length, excluding heliports.
  - (3) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport specified in paragraph (d) of this section.
- (c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that

would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

- (d) Any construction or alteration on any of the following airports and heliports:
  - (1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications.
  - (2) A military airport under construction or an airport under construction that will be available for public use.
  - (3) An airport operated by a Federal agency or the DOD.
  - (4) An airport or heliport with at least one FAA-approved instrument approach procedure.
- (e) You do not need to file notice for construction or alteration of:
  - (1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation.
  - (2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose.
  - (3) Any construction or alteration for which notice is required by any other FAA regulation.
  - (4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

**77.11 Supplemental notice requirements.**

- (a) You must file supplemental notice with the FAA when:
  - (1) The construction or alteration is more than 200 feet in height AGL at its site; or
  - (2) Requested by the FAA.
- (b) You must file supplemental notice on a prescribed FAA form to be received within the time limits specified in the FAA determination. If no time limit

has been specified, you must submit supplemental notice of construction to the FAA within 5 days after the structure reaches its greatest height.

- (c) If you abandon a construction or alteration proposal that requires supplemental notice, you must submit notice to the FAA within 5 days after the project is abandoned.
- (d) If the construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

## Subpart C

# STANDARDS FOR DETERMINING OBSTRUCTIONS TO AIR NAVIGATION OR NAVIGATIONAL AIDS OR FACILITIES

### 77.13 Applicability.

This subpart describes the standards used for determining obstructions to air navigation, navigational aids, or navigational facilities. These standards apply to the following:

- (a) Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used and any permanent or temporary apparatus.
- (b) The alteration of any permanent or temporary existing structure by a change in its height, including appurtenances, or lateral dimensions, including equipment or material used therein.

### 77.15 Scope.

- (a) This subpart describes standards used to determine obstructions to air navigation that may affect the safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities. Such facilities include air navigation aids, communication equipment, airports, Federal airways, instrument approach or departure procedures, and approved off-airway routes.
- (b) Objects that are considered obstructions under the standards described in this subpart are presumed hazards to air navigation unless further aeronautical study concludes that the object is not a hazard. Once further aeronautical study has been initiated, the FAA will use the standards in this subpart, along with FAA policy and guidance material, to determine if the object is a hazard to air navigation.
- (c) The FAA will apply these standards with reference to an existing airport facility, and airport proposals received by the FAA, or the appropriate military service, before it issues a final determination.
- (d) For airports having defined runways with specially prepared hard surfaces, the primary surface for each runway extends 200 feet beyond each end of the runway. For airports having defined strips or pathways used regularly for aircraft takeoffs and landings, and designated runways, without specially prepared hard surfaces, each end of the primary surface for each such runway shall coincide with the corresponding end of the runway. At airports, excluding seaplane bases, having a defined landing and takeoff area with no defined pathways for aircraft takeoffs and landings, a determination

must be made as to which portions of the landing and takeoff area are regularly used as landing and takeoff pathways. Those determined pathways must be considered runways and an appropriate primary surface as defined in §77.19 will be considered as longitudinally centered on each such runway. Each end of that primary surface must coincide with the corresponding end of that runway.

- (e) The standards in this subpart apply to construction or alteration proposals on an airport (including heliports and seaplane bases with marked lanes) if that airport is one of the following before the issuance of the final determination:
  - (1) Available for public use and is listed in the Airport/Facility Directory, Supplement Alaska, or Supplement Pacific of the U.S. Government Flight Information Publications; or
  - (2) A planned or proposed airport or an airport under construction of which the FAA has received actual notice, except DOD airports, where there is a clear indication the airport will be available for public use; or,
  - (3) An airport operated by a Federal agency or the DOD; or,
  - (4) An airport that has at least one FAA-approved instrument approach.

**77.17 Obstruction Standards.**

- (a) An existing object, including a mobile object, is, and a future object would be, an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:
  - (1) A height of 499 feet above ground level at the site of the object.
  - (2) A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.
  - (3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.

- (4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.
  - (5) The surface of a takeoff and landing area of an airport or any imaginary surface established under §77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.
- (b) Except for traverse ways on or near an airport with an operative ground traffic control service furnished by an airport traffic control tower or by the airport management and coordinated with the air traffic control service, the standards of paragraph (a) of this section apply to traverse ways used or to be used for the passage of mobile objects only after the heights of these traverse ways are increased by:
- (1) 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance.
  - (2) 15 feet for any other public roadway.
  - (3) 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road.
  - (4) 23 feet for a railroad.
  - (5) For a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.

### **77.19 Civil Airport Imaginary Surfaces.**

The following civil airport imaginary surfaces are established with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach procedure existing or planned for that runway end.

- (a) Horizontal surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:
  - (1) 5,000 feet for all runways designated as utility or visual;

- (2) 10,000 feet for all other runways. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.
- (b) Conical surface. A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
  - (c) Primary surface. A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:
    - (1) 250 feet for utility runways having only visual approaches.
    - (2) 500 feet for utility runways having nonprecision instrument approaches.
    - (3) For other than utility runways the width is:
      - (i) 500 feet for visual runways having only visual approaches.
      - (ii) 500 feet for nonprecision instrument runways having visibility minimums greater than three-fourths statute mile.
      - (iii) 1,000 feet for a nonprecision instrument runway having a no precision instrument approach with visibility minimums as low as three fourths of a statute mile, and for precision instrument runways.
      - (iv) The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of that runway.
  - (d) Approach surface. A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.
    - (1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:

- (i) 1,250 feet for that end of a utility runway with only visual approaches;
  - (ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;
  - (iii) 2,000 feet for that end of a utility runway with a nonprecision instrument approach;
  - (iv) 3,500 feet for that end of a nonprecision instrument runway other than utility, having visibility minimums greater than three fourths of a statute mile;
  - (v) 4,000 feet for that end of a nonprecision instrument runway, other than utility, having a nonprecision instrument approach with visibility minimums as low as three fourths statute mile; and
  - (vi) 16,000 feet for precision instrument runways.
- (2) The approach surface extends for a horizontal distance of:
- (i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;
  - (ii) 10,000 feet at a slope of 34 to 1 for all nonprecision instrument runways other than utility; and,
  - (iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
- (3) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.
- (e) Transitional surface. These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

**77.21 Department of Defense (DOD) airport imaginary surfaces.**

- (a) Related to airport reference points. These surfaces apply to all military airports. For the purposes of this section, a military airport is any airport operated by the DOD.



- (1) Inner horizontal surface. A plane that is oval in shape at a height of 150 feet above the established airfield elevation. The plane is constructed by scribing an arc with a radius of 7,500 feet about the centerline at the end of each runway and interconnecting these arcs with tangents.
  - (2) Conical surface. A surface extending from the periphery of the inner horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.
  - (3) Outer horizontal surface. A plane, located 500 feet above the established airfield elevation, extending outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
- (b) Related to runways. These surfaces apply to all military airports.
- (1) Primary surface. A surface located on the ground or water longitudinally centered on each runway with the same length as the runway. The width of the primary surface for runways is 2,000 feet. However, at established bases where substantial construction has taken place in accordance with previous lateral clearance criteria, the 2,000-foot width may be reduced to the former criteria.
  - (2) Clear zone surface. A surface located on the ground or water at each end of the primary surface, with a length of 1,000 feet and the same width as the primary surface.
  - (3) Approach clearance surface. An inclined plane, symmetrical about the runway centerline extended, beginning 200 feet beyond each end of the primary surface at the centerline elevation of the runway end and extending for 50,000 feet. The slope of the approach clearance surface is 50 to 1 along the runway centerline extended until it reaches an elevation of 500 feet above the established airport elevation. It then continues horizontally at this elevation to a point 50,000 feet from the point of beginning. The width of this surface at the runway end is the same as the primary surface, it flares uniformly, and the width at 50,000 is 16,000 feet.
  - (4) Transitional surfaces. These surfaces connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or other transitional surfaces. The slope of the transitional surface is 7 to 1 outward and upward at right angles to the runway centerline.

**77.23 Helicopter imaginary surfaces.**

- (a) Primary surface. The area of the primary surface coincides in size and shape with the designated takeoff and landing area. This surface is a horizontal plane at the elevation of the established heliport elevation.
- (b) Approach surface. The approach surface begins at each end of the heliport primary surface with the same width as the primary surface, and extends outward and upward for a horizontal distance of 4,000 feet where its width is 500 feet. The slope of the approach surface is 8 to 1 for civil heliports and 10 to 1 for military heliports.
- (b) Transitional surfaces. These surfaces extend outward and upward from the lateral boundaries of the heliport primary surface and from the approach surfaces at a slope of 2 to 1 for a distance of 250 feet measured horizontally from the centerline of the primary and approach surfaces.

**Subpart D**  
**AERONAUTICAL STUDIES AND DETERMINATIONS**

**77.25 Applicability.**

- (a) This subpart applies to any aeronautical study of a proposed construction or alteration for which notice to the FAA is required under §77.9.
- (b) The purpose of an aeronautical study is to determine whether the aeronautical effects of the specific proposal and, where appropriate, the cumulative impact resulting from the proposed construction or alteration when combined with the effects of other existing or proposed structures, would constitute a hazard to air navigation.
- (c) The obstruction standards in subpart C of this part are supplemented by other manuals and directives used in determining the effect on the navigable airspace of a proposed construction or alteration. When the FAA needs additional information, it may circulate a study to interested parties for comment.

### **77.27 Initiation of studies.**

The FAA will conduct an aeronautical study when:

- (a) Requested by the sponsor of any proposed construction or alteration for which a notice is submitted; or
- (b) The FAA determines a study is necessary.

### **77.29 Evaluating aeronautical effect.**

- (a) The FAA conducts an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by the FAA, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies include evaluating:
  - (1) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules;
  - (2) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules;
  - (3) The impact on existing and planned public use airports;
  - (4) Airport traffic capacity of existing public use airports and public use airport development plans received before the issuance of the final determination;
  - (5) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures;
  - (6) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, and other surveillance systems;
  - (7) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.
- (b) If you withdraw the proposed construction or alteration or revise it so that it is no longer identified as an obstruction, or if no further aeronautical study is necessary, the FAA may terminate the study.

### **77.31 Determinations.**

- (a) The FAA will issue a determination stating whether the proposed construction or alteration would be a hazard to air navigation, and will advise all known interested persons.
- (b) The FAA will make determinations based on the aeronautical study findings and will identify the following:
  - (1) The effects on VFR/IFR aeronautical departure/arrival operations, air traffic procedures, minimum flight altitudes, and existing, planned, or proposed airports listed in §77.15(e) of which the FAA has received actual notice prior to issuance of a final determination.
  - (2) The extent of the physical and/or electromagnetic effect on the operation of existing or proposed air navigation facilities, communication aids, or surveillance systems.
- (c) The FAA will issue a Determination of Hazard to Air Navigation when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact.
- (d) A Determination of No Hazard to Air Navigation will be issued when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation. A Determination of No Hazard to Air Navigation may include the following:
  - (1) Conditional provisions of a determination.
  - (2) Limitations necessary to minimize potential problems, such as the use of temporary construction equipment.
  - (3) Supplemental notice requirements, when required.
  - (4) Marking and lighting recommendations, as appropriate.
- (e) The FAA will issue a Determination of No Hazard to Air Navigation when a proposed structure does not exceed any of the obstruction standards and would not be a hazard to air navigation.

### **77.33 Effective period of determinations.**

- (a) The effective date of a determination not subject to discretionary review under 77.37(b) is the date of issuance. The effective date of all other determinations for a proposed or existing structure is 40 days from the date

of issuance, provided a valid petition for review has not been received by the FAA. If a valid petition for review is filed, the determination will not become final, pending disposition of the petition.

- (b) Unless extended, revised, or terminated, each Determination of No Hazard to Air Navigation issued under this subpart expires 18 months after the effective date of the determination, or on the date the proposed construction or alteration is abandoned, whichever is earlier.
- (c) A Determination of Hazard to Air Navigation has no expiration date.

**77.35 Extensions, terminations, revisions and corrections.**

- (a) You may petition the FAA official that issued the Determination of No Hazard to Air Navigation to revise or reconsider the determination based on new facts or to extend the effective period of the determination, provided that:
  - (1) Actual structural work of the proposed construction or alteration, such as the laying of a foundation, but not including excavation, has not been started; and
  - (2) The petition is submitted at least 15 days before the expiration date of the Determination of No Hazard to Air Navigation.
- (b) A Determination of No Hazard to Air Navigation issued for those construction or alteration proposals not requiring an FCC construction permit may be extended by the FAA one time for a period not to exceed 18 months.
- (c) A Determination of No Hazard to Air Navigation issued for a proposal requiring an FCC construction permit may be granted extensions for up to 18 months, provided that:
  - (1) You submit evidence that an application for a construction permit/license was filed with the FCC for the associated site within 6 months of issuance of the determination; and
  - (2) You submit evidence that additional time is warranted because of FCC requirements; and
  - (3) Where the FCC issues a construction permit, a final Determination of No Hazard to Air Navigation is effective until the date prescribed by the FCC for completion of the construction. If an extension of the original FCC completion date is needed, an extension of the FAA determination must be requested from the Obstruction Evaluation Service (OES).

- (4) If the Commission refuses to issue a construction permit, the final determination expires on the date of its refusal.

## **Subpart E**

### **PETITIONS FOR DISCRETIONARY REVIEW**

#### **77.37 General.**

- (a) If you are the sponsor, provided a substantive aeronautical comment on a proposal in an aeronautical study, or have a substantive aeronautical comment on the proposal but were not given an opportunity to state it, you may petition the FAA for a discretionary review of a determination, revision, or extension of a determination issued by the FAA.
- (b) You may not file a petition for discretionary review for a Determination of No Hazard that is issued for a temporary structure, marking and lighting recommendation, or when a proposed structure or alteration does not exceed obstruction standards contained in subpart C of this part.

#### **77.39 Contents of a petition.**

- (a) You must file a petition for discretionary review in writing and it must be received by the FAA within 30 days after the issuance of a determination under §77.31, or a revision or extension of the determination under §77.35.
- (b) The petition must contain a full statement of the aeronautical basis on which the petition is made, and must include new information or facts not previously considered or presented during the aeronautical study, including valid aeronautical reasons why the determination, revisions, or extension made by the FAA should be reviewed.
- (c) In the event that the last day of the 30-day filing period falls on a weekend or a day the Federal government is closed, the last day of the filing period is the next day that the government is open.
- (d) The FAA will inform the petitioner or sponsor (if other than the petitioner) and the FCC (whenever an FCC-related proposal is involved) of the filing of the petition and that the determination is not final pending disposition of the petition.

#### **77.41 Discretionary review results.**

- (a) If discretionary review is granted, the FAA will inform the petitioner and the sponsor (if other than the petitioner) of the issues to be studied and reviewed. The review may include a request for comments and a review of all records from the initial aeronautical study.

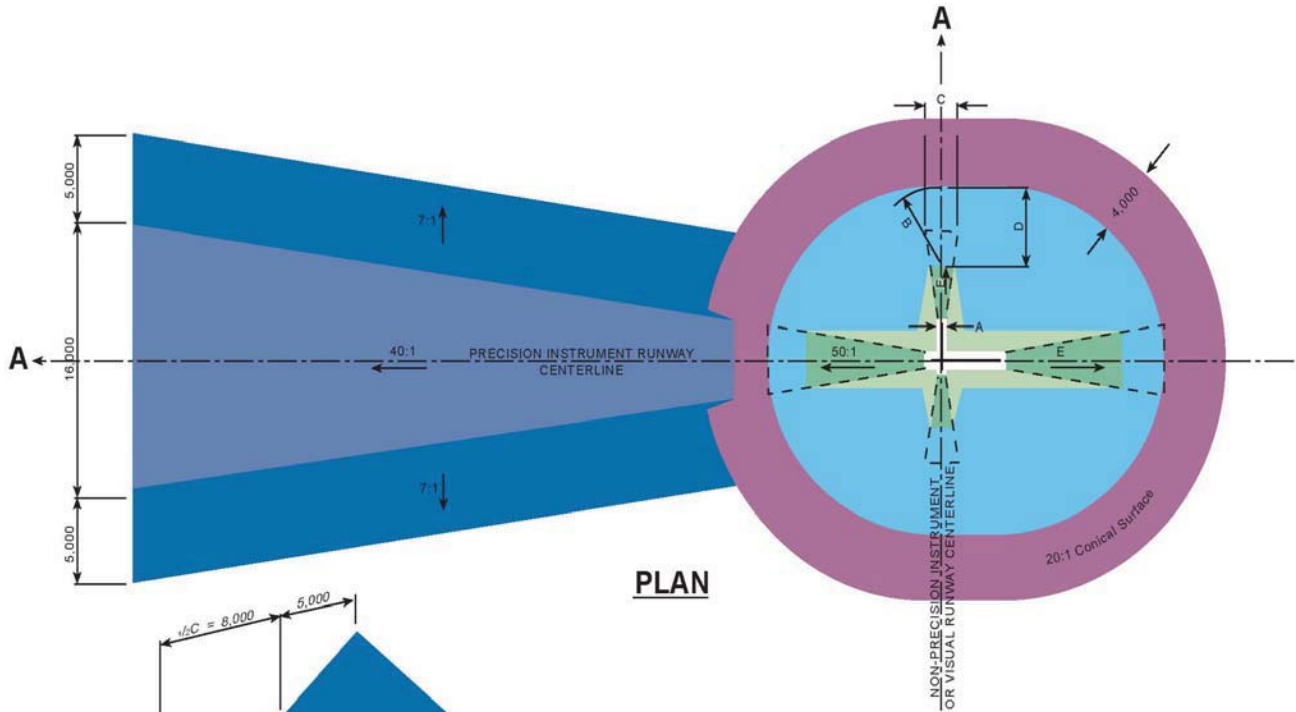


- (b) If discretionary review is denied, the FAA will notify the petitioner and the sponsor (if other than the petitioner), and the FCC, whenever a FCC-related proposal is involved, of the basis for the denial along with a statement that the determination is final.
- (c) After concluding the discretionary review process, the FAA will revise, affirm, or reverse the determination.

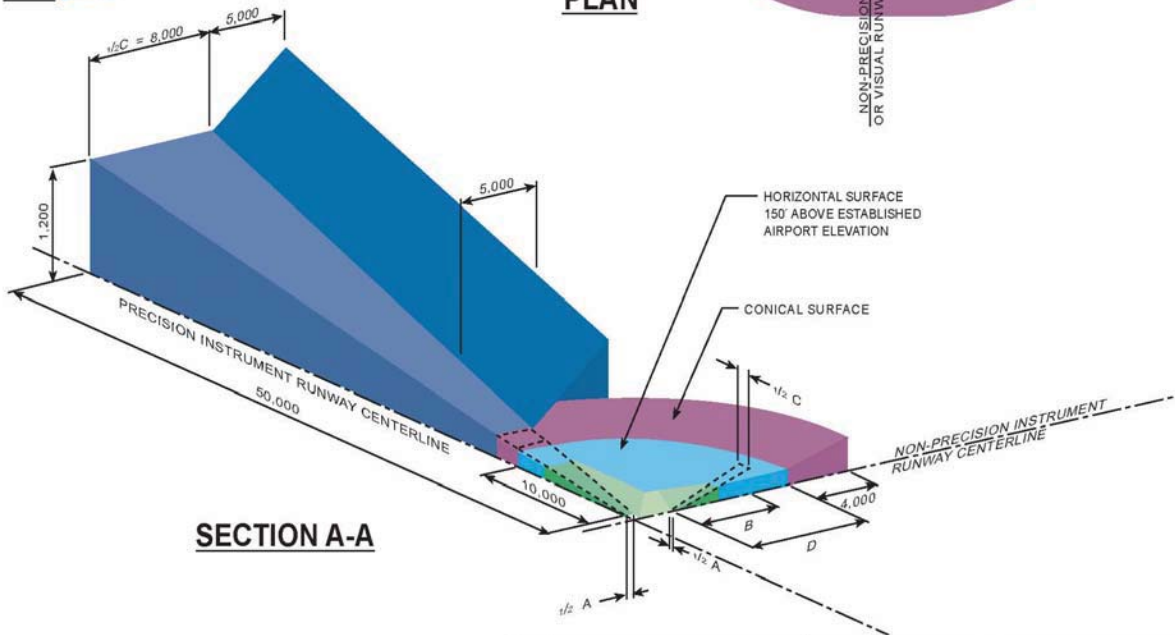
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*Editor's Note:* The following pages include an example rendering of the Part 77 imaginary surfaces for a civil airport and a copy of FAA Form 7460-1 with filing instructions.

Part 77 Civil Airport Imaginary Surfaces



PLAN



SECTION A-A

**SURFACE SLOPE KEY**

- HORIZONTAL SURFACE
- 20:1
- 7:1
- 7:1
- VARIES (SEE "E" VALUE IN TABLE BELOW)
- 40:1 (PRECISION INSTRUMENT RUNWAY ONLY)

DIM.	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		UTILITY	LARGER THAN UTILITY	UTILITY	LARGER THAN UTILITY		
			X	Y			
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		UTILITY	LARGER THAN UTILITY	UTILITY	LARGER THAN UTILITY		
					X	Y	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

X - VISIBILITY MINIMUMS GREATER THAN 1/4 MILE  
 Y - VISIBILITY MINIMUMS AS LOW AS 1/4 MILE  
 \* - PRECISION INSTRUMENT APPROACH SLOPE IS 30:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

Source: FAR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*, Sec. 77.19. January 18, 2011.



**Form 7460-1 – Notice of Proposed Construction or Alteration** *(continued)*

A Notice of Proposed Construction or Alteration (Form 7460-1) must be filed with the Federal Aviation Administration (FAA).

If construction or alteration is not located on an airport, you may file electronically (i.e., e-filing) using the following web-link:

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

If construction or alteration is located on an airport, you must file Form 7460-1 via US Postal Mail to:

Western Pacific Region  
HI, CA, NV, AZ, GU  
Western-Pacific Regional Office Air Traffic Division, AWP-520  
15000 Aviation Boulevard Hawthorne, CA 90260  
Tel: 310-725-6557

Form 7460-1 is available online in PDF format (data may be typed into form).

[http://www.faa.gov/documentLibrary/media/form/faa7460\\_1.pdf](http://www.faa.gov/documentLibrary/media/form/faa7460_1.pdf)

Note:

Original form on Federal Aviation Administration website contains interactive fields.

Source: Federal Aviation Administration, Form 7460-1, February 1999.

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**Appendix D**  
Airport Noise Compatibility Considerations



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## Appendix D

### AIRPORT NOISE COMPATIBILITY CONSIDERATIONS

The Community Noise Equivalent Level (CNEL) metric is used in California for defining aircraft noise contours. The CNEL value represents the 24-hour, time-weighted cumulative noise level for an average day during the study year. CNEL is computed by summing the noise from all flights to and from an airport during an average day. The contours reflect the configuration and orientation of the runways, the utilization of the runways, and the flight tracks most heavily used by aircraft. In computing CNEL, noise events occurring during the evening hours (7 p.m. to 10 p.m.) are assigned an extra weight of 4.8 decibels, and events during the nighttime hours (10 p.m. to 7 a.m.) are assigned an extra ten decibels. These extra weights are intended to reflect increased human sensitivity to noise during the quieter periods of the day when most people are at home relaxing and sleeping.

#### D.1 STATE OF CALIFORNIA AIRPORT NOISE REGULATIONS

The State of California's airport noise standards declare that the "level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a CNEL of 65 dB..."<sup>1</sup> The board of supervisors of the county in which the airport is located is empowered to declare that the airport has a "noise problem" if it has incompatible land uses inside the CNEL 65 dB contour. The regulations consider the following uses to be incompatible:

- Residences
- Public and private schools
- Hospitals and convalescent homes
- Places of worship

The law stipulates that the following actions can render incompatible uses compatible:

- Acquisition by the airport of an aviation easement for aircraft noise
- Sound insulation sufficient to reduce the interior CNEL due to aircraft noise to 45 dB or less in habitable rooms

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<sup>1</sup> California Code of Regulations, Title 21, Division 2.5, Chapter 6, Section 5006.

In areas where noise exposure (from any source) is greater than CNEL 65 dB (or DNL 65 dB), state housing law requires sound insulation for multi-family residential uses, hotels and motels, and schools.<sup>2</sup> State housing law states explicitly, however, that where a noise/land use incompatibility exists, removal of existing housing should be the last resort to remedy the incompatibility.

Under the state noise law, the area inside an airport's CNEL 65 dB contour that is occupied by incompatible uses is called the "noise impact area." Airports with a noise impact area are prohibited from operating without a variance from the state noise standards that is issued by the State Department of Transportation (Caltrans) Variances are typically conditioned upon the airport taking action to reduce its noise impact area to zero (i.e., no incompatible land uses within the CNEL 65 dB contour).

In 1972, the San Mateo County Board of Supervisors declared SFO to be a "noise problem airport," and the Airport was required to operate with variances from the state noise standards for a number of years thereafter. In March 2002, due to the Airport's efforts to help reduce the number of incompatible land uses in its noise impact area, the San Mateo County Board of Supervisors determined that the Airport had achieved a noise impact area of zero and therefore was no longer required by the State to operate under a variance from the state noise standards.

## **D.2 NOISE/LAND USE COMPATIBILITY GUIDELINES**

Noise is a problem only if someone hears it and is annoyed by it. Research has shown that the tendency of people to be annoyed by noise varies systematically based on their activities at any given time. People are most likely to be annoyed when they are relaxing at home or trying to sleep. People also tend to be annoyed in places where they expect a certain amount of quiet for contemplation, concentration, or enjoying an artistic performance.

The concept of "noise/land use compatibility" is based on these systematic variations. Thus, land uses that are considered to be sensitive to or incompatible with noise above a certain level include housing, schools, places of worship, performing arts centers, hospitals, and nursing homes. Uses that are considered to be generally compatible with noise include commercial, industrial, and transportation and utilities.

### **D.2.1 Federal Noise/Land Use Compatibility Guidelines**

Numerous sets of noise/land use compatibility guidelines have been promulgated over the years by various agencies and organizations. The Federal Aviation Administration's guidelines are included in Federal Aviation Regulation (FAR) Part 150 and are quoted in their entirety in **Table D-1**.

---

<sup>2</sup> DNL, day-night average sound level, is a cumulative noise metric similar to CNEL except that it does not include the extra 4.8-decibel weight for evening noise.

The FAR Part 150 guidelines describe residential land uses, schools, and outdoor music shells and amphitheaters as “noncompatible” with noise levels above DNL 65 dB.<sup>3</sup> Sound insulation to achieve an outdoor-to-indoor noise level reduction of 25 to 30 decibels is advised when a local community determines that residential uses and schools must be allowed in areas exposed to noise above DNL 65 dB. Hospitals, nursing homes, churches, auditoriums, and concert halls are considered noise-sensitive uses that require sound insulation if permitted within the DNL 65 dB contour.

The FAR Part 150 noise compatibility guidelines have been used as the basis for describing noise-impacted land uses in prior FAR Part 150 studies undertaken at SFO.

### **D.2.2 State Noise/Land Use Compatibility Guidelines**

State planning law requires that each community’s general plan include a noise element. The state General Plan Guidance manual includes definitions of noise-sensitive land uses and a chart of land use/noise compatibility guidelines (presented on **Figure D-1**). It recommends that land use decisions be made so as to avoid land use/noise conflicts.

The *California Airport Land Use Planning Handbook*, published in 2011 (the 2011 *Handbook*) provides recommendations for drafting airport noise provisions of a CLUP that are consistent with the state general plan noise element guidance and the state sound insulation regulation. For example, residential uses are indicated as compatible up to CNEL 60 dB, compatible up to CNEL 65 dB in noisy urban environments or near noise problem airports, and conditionally compatible above CNEL 65 dB with sound insulation. No new residential uses are considered compatible above CNEL 70 dB. The 2011 *Handbook* recommends that CLUPs require disclosure of the proximity to an airport for properties offered for sale that are located within an Airport Influence Area (AIA) boundary or within the CNEL 65 dB noise contour to help avoid noise compatibility conflicts and resulting litigation. State law AB 2776, adopted in 2002, formalized this advice to a large extent, requiring disclosure for all real property within an “airport influence area,” the boundaries of which are to be determined through the CLUP process.<sup>4</sup>

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<sup>3</sup> The DNL metric – day-night average sound level – is the standard noise metric used in the United States, outside California. It is a 24-hour, time-weighted cumulative metric similar to CNEL. It differs from CNEL only in excluding the 4.8-decibel weight for evening noise. For most purposes, CNEL and DNL are interchangeable.

<sup>4</sup> This legislation is codified at Business and Professions Code, Section 11010.

Table D-1  
FAR PART 150 LAND USE COMPATIBILITY GUIDELINES

Land Use	Yearly Day-Night Average Sound Level DNL					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<b>Residential</b>						
Residential, other than mobile homes and transient lodgings	Y	N (a)	N (a)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N (a)	N (a)	N (a)	N	N
<b>Public use</b>						
Schools	Y	N (a)	N (a)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y (b)	Y (c)	Y (d)	Y (d)
Parking	Y	Y	Y (b)	Y (c)	Y (d)	N
<b>Commercial use</b>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail - building materials, hardware, and farm equipment	Y	Y	Y (b)	Y (c)	Y (d)	N
Retail trade - general	Y	Y	25	30	N	N
Utilities	Y	Y	Y (b)	Y (c)	Y (d)	N
Communication	Y	Y	25	30	N	N
<b>Manufacturing and production</b>						
Manufacturing, general	Y	Y	Y (b)	Y (c)	Y (d)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y (e)	Y (f)	Y (g)	Y (g)	Y (g)
Livestock farming and breeding	Y	Y (e)	Y (f)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<b>Recreational</b>						
Outdoor sports arenas and spectator sports	Y	Y (h)	Y (h)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

NOTE: The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

Table D-1 (page 2 of 2)

FAR PART 150 LAND USE COMPATIBILITY GUIDELINES

- DNL = Day-night average sound level, in A-weighted decibels.
- Y (Yes) = Land use and related structures compatible without restrictions.
- N (No) = Land use and related structures are not compatible and should be prohibited.
- 25, 30, 35 = Land use and related structures generally compatible; measures to achieve a Noise Level Reduction (NLR) of 25, 30, or 35 dB must be incorporated into design and construction of structure.

- (a) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor NLR of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB; thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
- (b) Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
- (c) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
- (d) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
- (e) Residential buildings require a NLR of 25 dB.
- (f) Residential buildings require a NLR of 30 dB.
- (g) Residential buildings not permitted.
- (h) Land use compatible provided special sound reinforcement systems are installed.

Source: 14 Code of Federal Regulations Part 150, Airport Noise Compatibility Planning, Appendix A, Table 1.

### D.3 EXISTING NOISE COMPATIBILITY CONFLICTS

While many noise-sensitive land uses remain within the CNEL 65 dB noise contour, as shown on **Figure D-2**, virtually all have been rendered “noise-compatible” through the Airport’s noise mitigation programs, primarily the sound insulation programs administered by local governments.

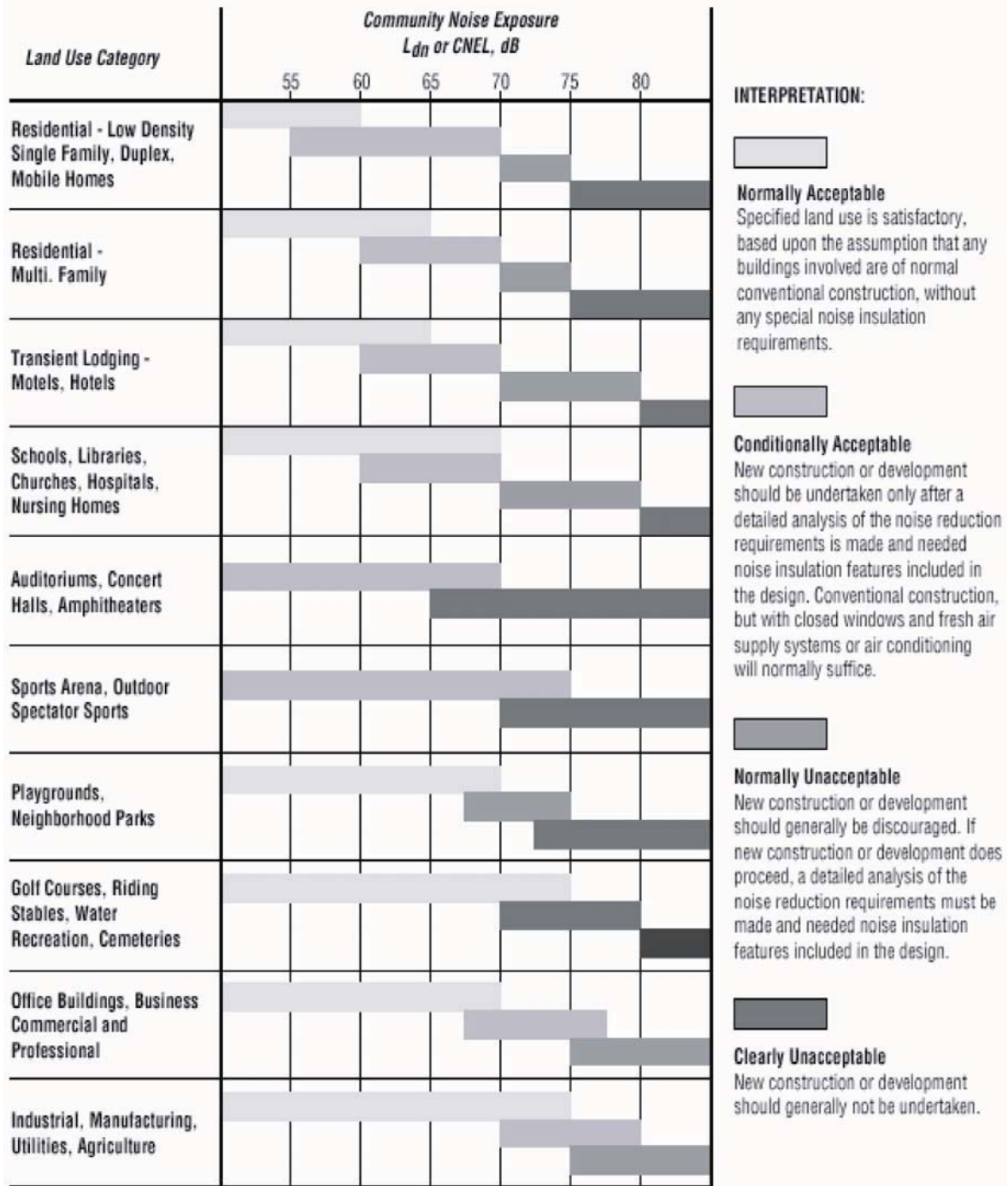
State housing law does not support removal of noise-impacted houses to address noise compatibility, and based on the Regional Housing Needs Assessment (RHNA), any housing removed would need to be replaced with an equal number of equally affordable new units. With a lack of available, affordable, vacant land, replacement of these residential units is unrealistic. These uses are here to stay, and have been made as compatible as possible. Similarly, all but a few residential uses in the CNEL 65 dB have been made compatible using sound insulation. Owners of those that are not insulated have declined assistance.

Other uses in the Airport vicinity meet the 2011 *Handbook* compatibility criteria, but some are identified by either the Airport or local governments as problematic due to noise impacts. In interviews conducted by the consultant as part of this study, Airport staff have indicated concern about recently completed residential developments, such as The Crossing in San Bruno and Terra Bay in South San Francisco, that are near enough to the Airport to experience noise levels that may disturb future residents. Although these uses comply with state sound insulation standards, the Airport noise office has expressed concern that new noise complaints would be generated there. A review of the first year of occupation of The Crossing, a corner of which touches the Airport CNEL 65 dB and all of which is within the DNL 70 dB contour for two freeways, revealed that the Airport received just one noise complaint from residents of the development. No similar information was available from Terra Bay, which is generally less affected by freeway noise.

In interviews in early 2008, some local government planning officials also identified residential land uses that, while outside the Airport’s CNEL 65 dB and which are not technically incompatible, still experience substantial seasonal or overflight noise and are the source of numerous complaints. While these uses are technically compatible based on the relevant criteria and guidelines in the 2011 *Handbook*, the level of complaints suggests that the CNEL 65 dB threshold may not be low enough to ensure that all noise-related annoyances can be avoided.

Figure D-1

State Land Use Compatibility Guidelines for Noise Elements of Local General Plans

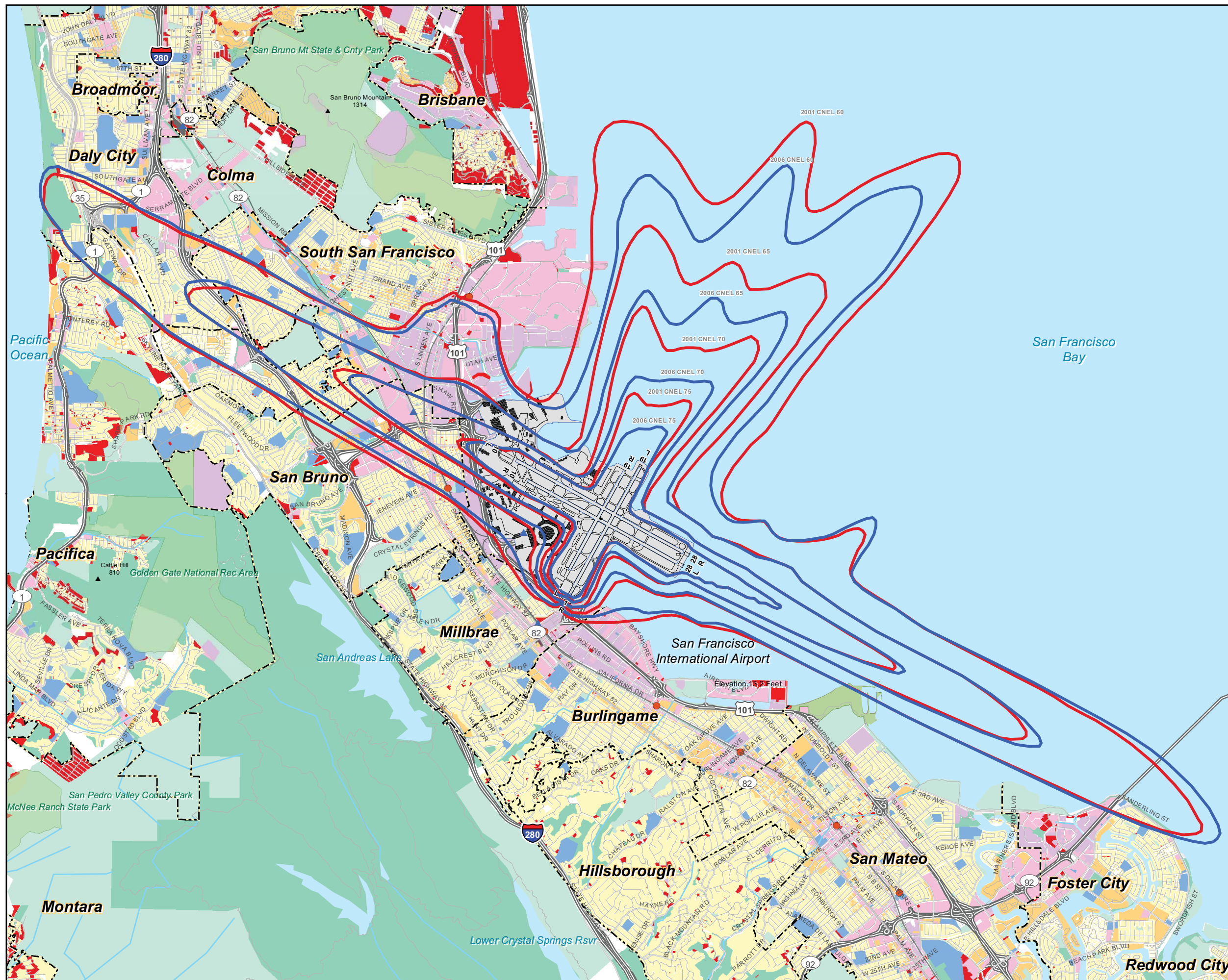


CCA0500

Source: State of California, *General Plan Guidelines*, 2003, page 250.



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**LEGEND**

- 2006 CNEL Contours
- 2001 CNEL Contours
- ▭ Airport Property
- ▲ BART Stations
- CALTRAIN Stations
- - - Municipal Boundary
- Railroads
- == Freeways
- Roads

Generalized Existing Land Use - 2007:

- ▭ Vacant
- ▭ Public
- ▭ Multi-Family Residential
- ▭ Single Family Residential
- ▭ Mixed use
- ▭ Commercial
- ▭ Industrial, Transportation, and Utilities
- ▭ Local Park, Golf Course, Cemetery
- ▭ Regional Park or Recreation Area
- ▭ Open Space

**Sources:**

Noise Contour Data:  
 - San Francisco International Airport  
 Noise Exposure Map Update - September 17, 2001

County Base Maps:  
 - San Mateo County Planning & Building Department, 2007

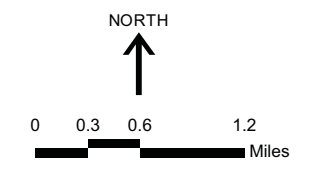


Figure D-2  
**2001 AND 2006 NOISE EXPOSURE MAPS**  
 Comprehensive Airport Land Use Plan  
 For The Environs of San Francisco International Airport  
**C/CAG**  
 City/County Association of Governments  
 of San Mateo County, California

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## D.4 NOISE COMPATIBILITY PLANNING ISSUES

### D.4.1 Future Land Use Changes

There is very little likelihood of new incompatible residential land uses within the Airport's CNEL 70 dB contour. The noise abatement MOU prevents jurisdictions that are parties to it from approving development of new residential units inside the CNEL 70 dB. The 2001 and 2006 CNEL 70 dB contours are present only on lands under the jurisdiction of parties to the MOU.

New residential units in some locations within or very near the CNEL 65 dB contour are possible in the future. The built-out urban environment in the study area will likely require residential infill for local municipalities to meet their Regional Housing Needs Assessment (RHNA) goals, possibly in areas that are affected to a certain extent by Airport noise. As communities in the study area meet the state requirement to update their housing elements, they must identify locations where new residential units might be added in order to meet their Regional Housing Needs allocations. Many of the possible locations are in the Airport environs, and a number of those are in areas that the jurisdictions' general plans indicate as having airport noise impacts, including several transit-oriented development (TOD) locations. Some of these are within the current CNEL 65 dB contour, while others close by might be within the CNEL 65 dB contour in the future should the contour expand. Therefore, in some jurisdictions, locations that have been off-limits to residential are now being considered for new residential uses. In interviews with local officials, the consultants were told, for example, that in Daly City, the school district has suggested rezoning for residential use some of its surplus lands that experience frequent overflights. Local planners also reported that officials in South San Francisco have discussed the possibility of opening some of the industrial area east of Highway 101 for residential use, despite local land use plans that restrict residential in this area based on the potential impacts of frequent overflights that turn over this area to avoid other residential areas.



*Above, a corner of The Crossing is inside the CNEL 65 dB contour. Below, Highway 380 viewed from The Crossing, in the DNL 70 dB freeway contour.*



Any new multifamily units within the CNEL 65 dB contour will have to meet state sound insulation standards, and other new residential units will have to meet any applicable local requirements. Sound insulation, where required, will reduce to a certain extent the impact of noise (and would render any sensitive land uses inside the CNEL 65 dB contour “compatible” under state law). But in areas where noise exposure may be seasonally high, even though it is less than CNEL 65 dB as an annual average, future residents may find that they are annoyed by aircraft noise.

There is little likelihood of future non-residential incompatible land uses, such as schools, hospitals, and hotels, being developed inside the CNEL 70 dB contour, because few vacant sites are available. In interviews, all of the jurisdictions indicated plans to intensify land use in TOD areas and in other redevelopment areas in the airport environs and in overflight areas, but most did not yet know what specific uses might be proposed. The City of San Bruno Planning Director indicated that a redevelopment site near (but not in) the current CNEL 70 dB could be considered for hotel use. The state Noise Compatibility Guidelines, adopted by the city, list hotels as “conditionally compatible” in such noise environments. This Planning Director indicated interest in guidance on what measures might make a “conditionally compatible” hotel use compatible or otherwise acceptable to the Airport.

#### **D.4.2 Future Changes to Noise Exposure**

Future land use compatibility can also be altered by changes in the Airport noise contours. Over the past 20 years or more, the noise contours at SFO have been shrinking. The primary reason has been the replacement of older aircraft by newer, quieter aircraft. Airport management also has worked with airlines on a “fly quiet” program to specify approach paths that reduce noise in developed areas, such as by shifting approaches out over the Bay rather than over cities along the approach centerline, and in departure areas, by turning over industrial uses and out to the Bay. Nevertheless, it is possible that increases in noise could occur in the future.

- Changes in noise contours can be driven by the following factors:
- Changes in runways (new construction, closure, lengthening, shortening)
- Changes in runway use
- Changes in the number of operations (arrivals and departures)
- Changes in the location of heavily used flight tracks
- Changes in the type of aircraft using the airport

Airport plans, as presented in the airport layout plan (Chapter II, Exhibit II-6), anticipate no changes to the current runway system at SFO. Runway use, which is driven by prevailing winds and weather patterns and which is facilitated by the current system of instrument approaches, is unlikely to change enough in the future to alter the noise exposure pattern.

The two remaining factors, flight tracks and changes in aircraft type, could possibly lead to changes in noise exposure over time. Future increases in the volume of traffic during peak hours of the day could make it more difficult to adhere to certain noise abatement flight procedures, primarily involving arrival and departure paths. Any deviations from these procedures are unlikely to become so pervasive as to change the shape and size of the CNEL noise contours, but they could result in changes sufficient to be noticeable to sensitive people, resulting in greater levels of annoyance and noise complaints.

It is also possible that the increases in peak period demand, and the attendant increases in air traffic congestion and delay, could cause airlines to switch to larger aircraft in high-volume markets, rather than increasing the number of flights, to serve the demand. Since larger aircraft generally tend to be louder (although there are exceptions), a large-scale trend of this nature could lead to increases in the size of the CNEL noise contours.

## **D.5 SUMMARY OF NOISE COMPATIBILITY PLANNING ISSUES**

The key noise compatibility planning issues can be summarized as follows:

- The very few vacant parcels available for development in the CNEL 70 dB contour mean little likelihood of new noise-incompatible development in that high-noise area.
- New incompatible residential development inside the CNEL 65 dB contour is possible in scattered areas of undeveloped land and in redevelopment areas, especially due to the interest in TOD and the need for local government compliance with RHNA.
- Revised local infill development policies to address noise compatibility requirements for isolated parcels of vacant land inside the CNEL 65 dB contour may be warranted. These would recognize the need for new development that is compatible with the surrounding area while, at the same time, mitigating adverse noise effects.
- State and local policy requirements for the provision of housing and moderate to high-density transit-oriented development (TOD) create tension with the state requirements and local goals to reduce noise incompatibilities.
- The promotion of long-term noise compatibility is complicated by the inherent uncertainty associated with future airport noise exposure.

## D.6 UPDATED NOISE CONTOUR MAPS

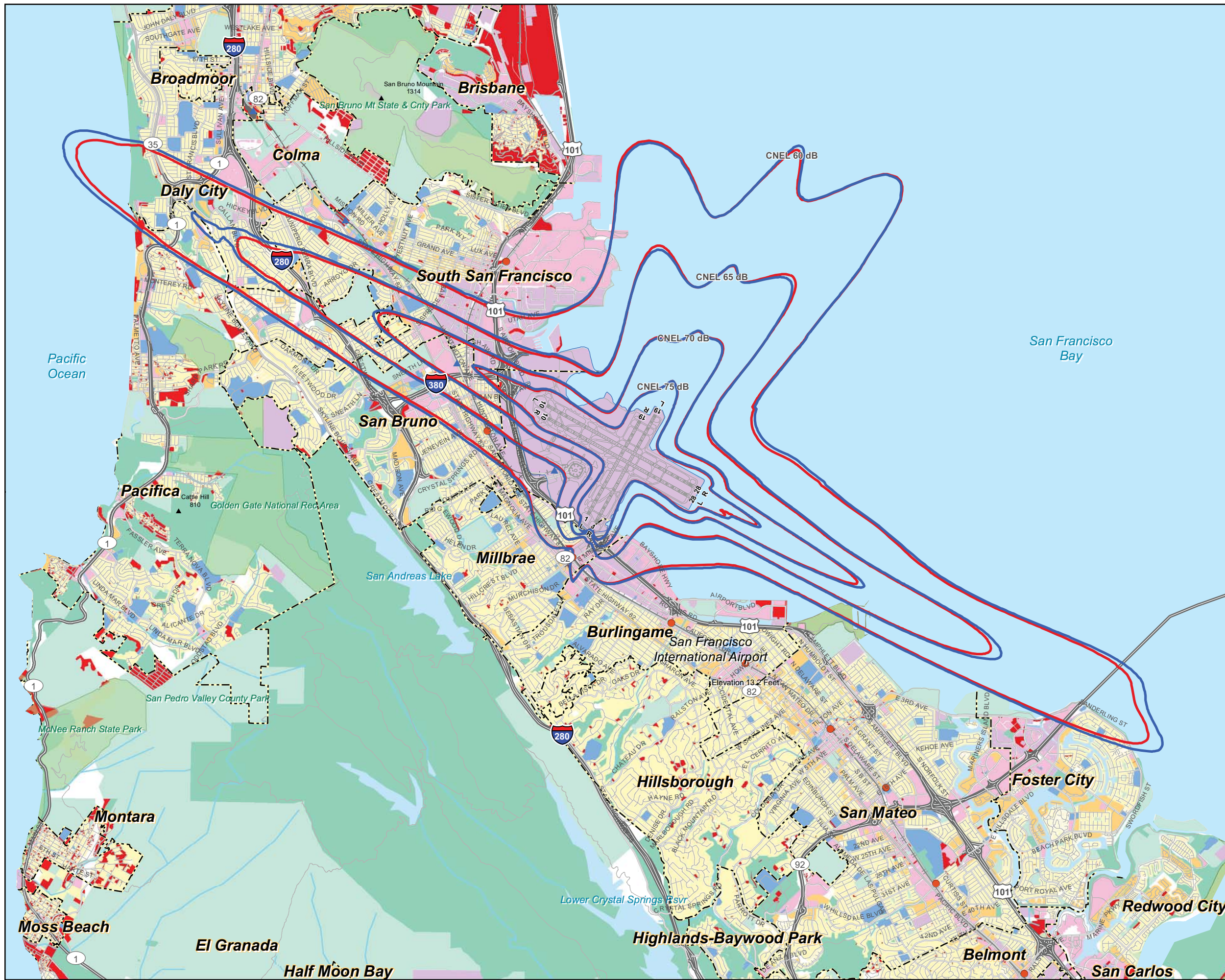
As part of the environmental assessment for the proposed runway safety area program, updated noise exposure forecasts were prepared for SFO.<sup>5</sup> The updated noise contours are depicted in **Figure D-3**. The forecast 2020 noise contour map is the basis for the noise compatibility policies in this CLUP.

Most of the contour area lies over San Francisco Bay, reflecting the high proportion of the use of Runways 28L and 28R for arrivals and Runways 1L and 1R for departures. The contours northeast of Runways 1L and 1R are broad with distinct lobes, corresponding to the primary departure headings. This pattern is typical of a runway that is used predominantly for departures, where the aircraft tend to disperse soon after takeoff.

The contours southeast of the Airport are driven by approaches to Runways 28L and 28R. The contours northwest of the Airport toward the San Bruno Gap are driven by departures. The extended contours reflect the high proportion of Runway 28L and 28R departures that continue along the runway centerline through the Gap. These tend to be heavy jet aircraft headed for international or long-haul domestic destinations. The configuration of the very short contours to the southwest reflects the very low percentage of arrivals to Runways 1L and 1R and departures from Runways 19L and 19R.

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<sup>5</sup> URS Corporation and BridgeNet International. *Draft Environmental Assessment, San Francisco International Airport Proposed Runway Safety Area Program*, Appendix C.2, page A.14, June 2011.



**LEGEND**

- Forecast 2020 CNEL Contours
- Forecast 2015 CNEL Contours
- ▭ Airport Property
- ▲ BART Stations
- CALTRAIN Stations
- - - Municipal Boundary
- Railroads
- == Freeways
- Roads

Generalized Existing Land Use - 2007:

- ▭ Vacant
- ▭ Public
- ▭ Multi-Family Residential
- ▭ Single Family Residential
- ▭ Mixed use
- ▭ Commercial
- ▭ Industrial, Transportation, and Utilities
- ▭ Local Park, Golf Course, Cemetery
- ▭ Regional Park or Recreation Area
- ▭ Open Space

**Sources:**

Noise Contour Data:  
 - Draft Environmental Assessment, Proposed Runway Safety Area Program, San Francisco International Airport. URS Corporation and BridgeNet International, June 2011

County Base Maps:  
 - San Mateo County Planning & Building Department, 2007

Prepared by: Ricondo & Associates, Inc. 2011.

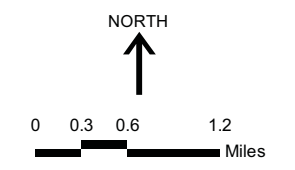


Figure D-3  
**FORECAST 2015 AND 2020 NOISE EXPOSURE**  
 Comprehensive Airport Land Use Plan  
 for the Environs of San Francisco International Airport  
**CICAG**  
 City/County Association of Governments  
 of San Mateo County, California



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**Appendix E**  
Airport Vicinity Safety Considerations



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## Appendix E

### AIRPORT VICINITY SAFETY CONSIDERATIONS

#### *Editor's Note:*

*This appendix was originally prepared in 2008, early in the ALUCP update process and relied on guidance in the 2002 edition of the Airport Land Use Planning Handbook prepared by the California Department of Transportation, Aeronautics Division (Caltrans). In October 2011, Caltrans released an updated edition of the Airport Land Use Planning Handbook. The updated Handbook included more specific guidance regarding the establishment of safety zones at air carrier airports. Specifically, the updated guidance discouraged the elimination of safety zones and the reduction in the size of safety zones at air carrier airports. Thus, the portions of this appendix that describe the potential reduction in size or elimination of safety zones are no longer considered valid.*

*Much of the discussion in this appendix remains useful, including the explanation of material explaining the basis for the safety zones and the rationale for the expansion in size of the Inner Turning Zones.*

---

This appendix is provided as background, explaining the development of the safety compatibility zones and policies. It is a compilation of working papers on safety compatibility produced during the CLUP update process. It explains the basis for the delineation of the safety zone boundaries. It also discusses the compatibility policy options that were considered.

The promotion of safety in the interaction between airports and surrounding land uses involves three key considerations:

1. The risk of injury to aircraft occupants
2. The safety of persons and property on the ground
3. The prevention of hazards to flight

Not all aircraft accidents involve aircraft that are out of control. In some situations, pilots retain a measure of control of the aircraft during an accident. These situations may involve forced landings, runway overshoots, or the failure to become airborne due to loss of power on takeoff. In many of these situations, the risk of fatalities and serious injuries to aircraft occupants can be reduced through the provision of adequate runway overruns and clear areas off the runway ends.

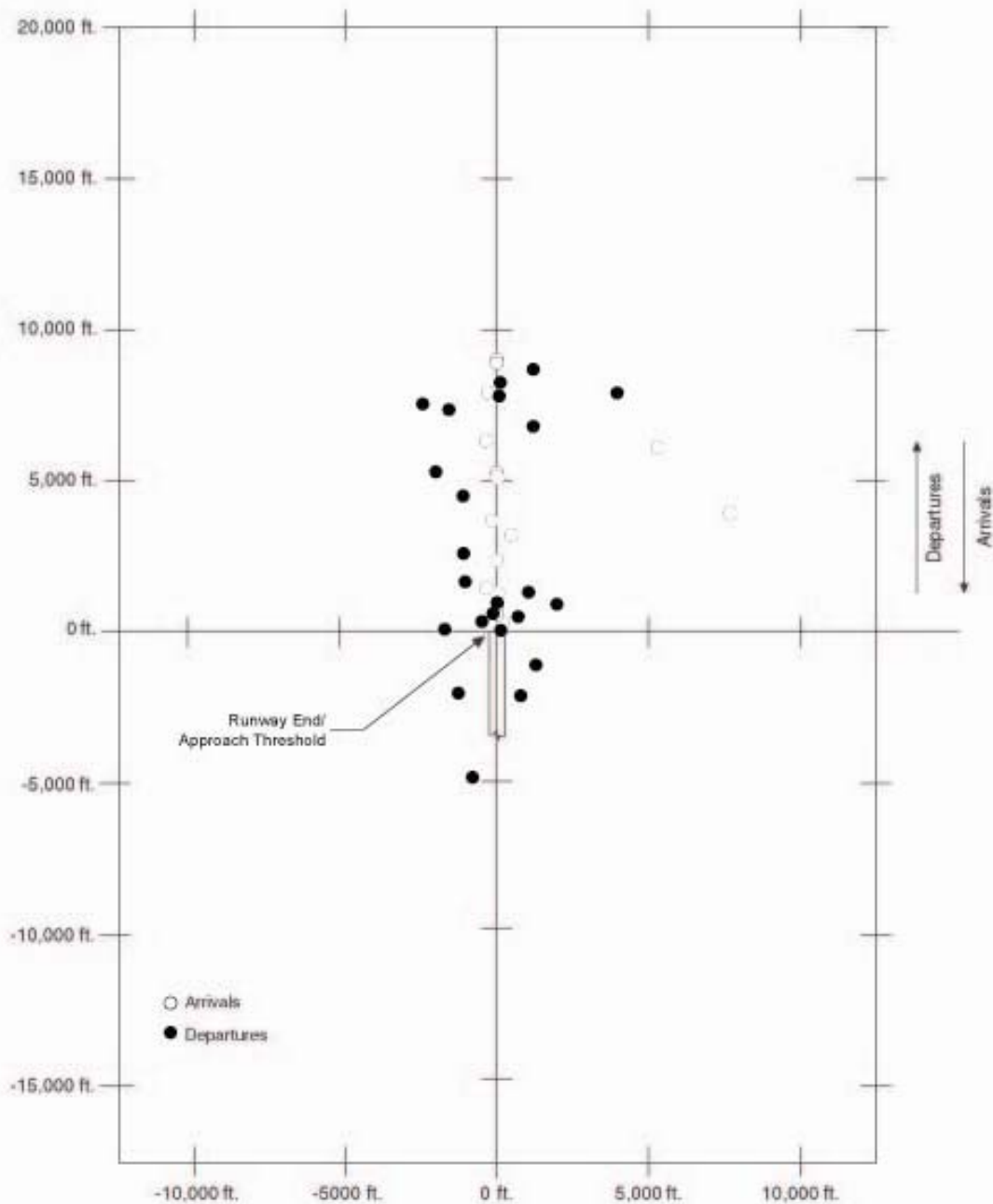
The severity of an aircraft accident can be greatly intensified by the nature of the land uses at an accident site. Aircraft accidents at hazardous materials storage facilities or high-density housing developments, for example, can be catastrophic.

Certain land uses or other features of urban development can create risks to aircraft in flight. These include uses that attract wildlife, especially large flocks of birds. Certain kinds of lighting and highly reflective surfaces can interfere with the vision of pilots in sighting the airport during approaches. In addition, electromagnetic interference from various communications facilities can disrupt aircraft communications and electronic navigational aids. Other land uses, such as large wind turbines, can interfere with radar transmission and reception.

## **E.1 AIRCRAFT ACCIDENT RISK**

Risk is a function of the likelihood of the occurrence of an event and the severity of the consequences of the event. While aircraft accidents, especially those involving commercial aircraft, are very rare, the consequences of commercial aircraft accidents can be severe.

In order to determine where land use regulations to promote airport safety compatibility should be applied, it is necessary to consider the pattern of aircraft accident locations with respect to airport runways. Because of the extreme rarity of aircraft accidents, accident location studies pool data from accidents at many airports. The data are “standardized” by coding each accident location by distance from the runway landing threshold (for arrival accidents) or takeoff point (for departure accidents). **Figure E-1** shows the results of the most recent domestic study of commercial aircraft accidents, undertaken by the FAA in 1990.



Note: Data derived from commercial aircraft accidents and incidents at U.S. commercial airports from 1978 to 1987. During that time, 246 accidents and incidents were reported. Locational data with sufficient detail to use for this chart were available for 39 cases.

Source: Department of Transportation, Federal Aviation Administration, Office of Safety Oversight, 1990. *Location of Commercial Aircraft Accidents/Incidents Relative to Runways*. Report No. DOT/FAA/ADM-90-1. Cited in California Airport Land Use Planning Handbook, State of California Department of Transportation, Division of Aeronautics, prepared by Schutt Moen Associates, 2002, page 8-11.\*

Figure E1

**COMMERCIAL AIRCRAFT ACCIDENT LOCATION PLAN**  
 Comprehensive Airport Land Use Plan  
 For The Environs of San Francisco International Airport

**C/CAG**  
 City/County Association of Governments  
 of San Mateo County, California  
 CCA0269



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The pattern on Figure E-1 shows a distinct clustering of arrival accidents along the extended runway centerline, short of the runway threshold. Fourteen of the 16 arrival accidents are within approximately 500 feet of the centerline. All are within 10,000 feet of the runway end. The 23 departure accidents are more widely scattered, although all are within 10,000 feet of the runway end, and within 5,000 feet of the extended runway centerline. Four of the departure accidents are short of the runway end. Six departure accidents are within about 500 feet of the extended centerline. Another 7 are within 1,500 feet of the centerline, and 5 more are within 2,500 feet of the centerline. One accident lies between 2,500 and 5,000 feet from the extended centerline.

Aviation regulatory organizations in the United Kingdom and the Netherlands have developed sophisticated models to assess the geographic patterns of accident risk. When analyzing commercial aircraft accident data, these models show a distinct tendency for accident risk to be highest along the extended runway centerline. This is consistent with the accident location pattern shown on Figure E-1.<sup>1</sup>

## **E.2 FEDERAL SAFETY STANDARDS**

The FAA has developed detailed guidance for airport operators related to the definition and regulation of safety areas in the immediate runway/taxiway environment.<sup>2</sup> These standards reflect the areas of highest accident risk, which are very near the runways on land that is typically owned by the airport.

These safety areas include:

- Runway safety area
- Runway object free area
- Obstacle free zone
- Taxiway safety area
- Taxiway and taxilane object free area
- Runway protection zone

The sizes of these areas vary depending on the type of aircraft using the airport and the nature of the approaches to the runway. With the exception of the runway protection zone (RPZ), all of these areas must be on airport property. The FAA strongly encourages airports to own all property within the RPZ, although it recognizes that this is not always feasible. The FAA has established land use standards for the RPZ. Residences, places of public assembly, and fuel storage

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<sup>1</sup> Mead & Hunt, et al., Airport Cooperative Research Program Project 03-03, Enhancing Airport Land Use Compatibility, Preliminary Draft Final Report, Chapter 7, February 2009.

<sup>2</sup> FAA Advisory Circular 150/5300-13, Airport Design, Sections 210 through 212, 205 through 307, and 403 and 404.

should be prohibited within the RPZ. In fact, the FAA describes it as “desirable” that all objects to be cleared within the RPZ.

### **E.2.1 Federal Guidance for Avoiding Hazards to Flight**

While the FAA has no specific guidance relating to visual hazards or electromagnetic interference, it has published detailed guidance relating to the avoidance of hazardous wildlife attractants.<sup>3</sup> Data on which the guidelines are based indicate that among the 25 species most responsible for causing damage to aircraft, 23, not surprisingly, are birds. Species most commonly associated with aircraft damage include vultures, geese, cormorants and pelicans, cranes, eagles, ducks, and osprey. Interestingly, deer are responsible for the highest incidence of damage to aircraft, primarily during the takeoff roll and landing rollout.

The FAA has the authority to require airport operators to establish wildlife hazard management plans (WHMP) when specific triggering events occur on or near the airport, as specified in the Federal Aviation Regulations (FAR Part 139.337).

The FAA guidelines advise that hazardous wildlife attractants be avoided within 10,000 feet of the “airport operating area” (the runways, taxiways, and parking ramps) for airports serving jet aircraft. The guidelines further advise that hazardous wildlife attractants that could cause the movement of hazardous wildlife across departure or arrival airspace should be avoided within 5 miles of the airport operating area. According to the FAA, the following land uses may attract hazardous wildlife and should be avoided within the 10,000-foot and 5-mile areas:

- Municipal solid waste landfills
- Underwater discharges of solid waste
- Wastewater treatment facilities
- Wastewater discharge and sludge disposal
- Artificial marshes
- Dredge spoil containment areas
- Confined livestock feeding operations
- Golf courses
- Commercial fishing and shellfish harvesting
- Agriculture, particularly cereal grains

The FAA guidelines also suggest mitigation measures for stormwater detention ponds that must be located within the 10,000-foot and 5-mile areas to make them less attractive to birds.

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<sup>3</sup> FAA Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports*, August 28, 2007.

### **E.3 STATE OF CALIFORNIA AIRPORT SAFETY REGULATIONS AND GUIDELINES**

The only provision of state law that explicitly regulates land use in the vicinity of airports on the basis of safety compatibility relates to the siting of new schools. The State Education Code (Section 17215) requires that before acquiring property for a new school within two miles of a runway, school districts must notify the State Department of Education. The Department must, in turn, notify the State Department of Transportation, which must investigate the site with respect to the airport and prepare a written report. If the Department of Transportation does not favor acquisition of the property as a school site, no state or local funds can be used for acquisition of the property or construction on the property.

State law also requires that, in preparing and amending comprehensive airport land use plans, airport land use commissions “shall be guided by ... the Airport Land Use Planning Handbook, published by the Division of Aeronautics...” The 2011 *Handbook* provides an assessment of aircraft accident location patterns and presents a number of guidelines relating to the establishment of airport safety zones and the regulation of land use in those zones. The guidance in the *Handbook* is based on a detailed analysis of aircraft accident locations and an assessment of risk factors.

The 2011 *Handbook* advises that the FAA’s guidance relating to hazardous wildlife attractants be incorporated into CLUPs. It also recommends that to avoid interfering with the vision of pilots, outdoor lights should be shielded so as not to be aimed above the horizon. The *Handbook* suggests that ALUCs should consider requesting FAA review of proposed development projects on a case-by-case basis if questions about potential electromagnetic or visual interference cannot otherwise be resolved.

#### **E.3.1 Safety Compatibility Zone Boundaries**

**Figure E-2** shows the state’s five suggested safety zones off the end of a runway used by large air carrier aircraft.

- Zone 1: Runway protection zone
- Zone 2: Inner approach/departure zone
- Zone 3: Inner turning zone
- Zone 4: Outer approach/departure zone
- Zone 5: Sideline zone

At airports with a large amount of general aviation activity, a sixth zone is suggested – a “traffic pattern zone” – corresponding with the area beneath the nominal traffic pattern. (Sometimes the FAR Part 77 horizontal or conical surface is taken as an approximation of the limits of the traffic pattern and is used as the Zone 6 boundary.) Zone 6 is an area of low accident risk, where only the highest density land uses need to be avoided, as well as land uses that can be hazardous wildlife attractants.

As at many large commercial airports, the “traffic pattern” at SFO can extend many miles on either end of a runway and even several miles lateral to the runways. (See Figures 3-5 and 3-6 in Chapter 3 for the pattern of flight tracks around the Airport.) The traffic pattern typically associated with general aviation airports, and often used for touch-and-go activity associated with pilot training, does not exist at SFO. Nevertheless, the definition of Zone 6 in the SFO environs could be helpful in defining an area within which potentially hazardous land uses should be avoided. In view of the size of the area within which the FAA recommends the avoidance of hazardous wildlife attractants, it would be reasonable to set the Zone 6 boundary to be coterminous with Area B of the Airport Influence Area, shown on Figure 4-2 in Chapter 4.

The shapes of the zones indicated on Figure E-2 are based on three assumptions:

- A runway length of at least 8,000 feet
- A precision instrument approach
- Straight-in and straight-out approaches and departures

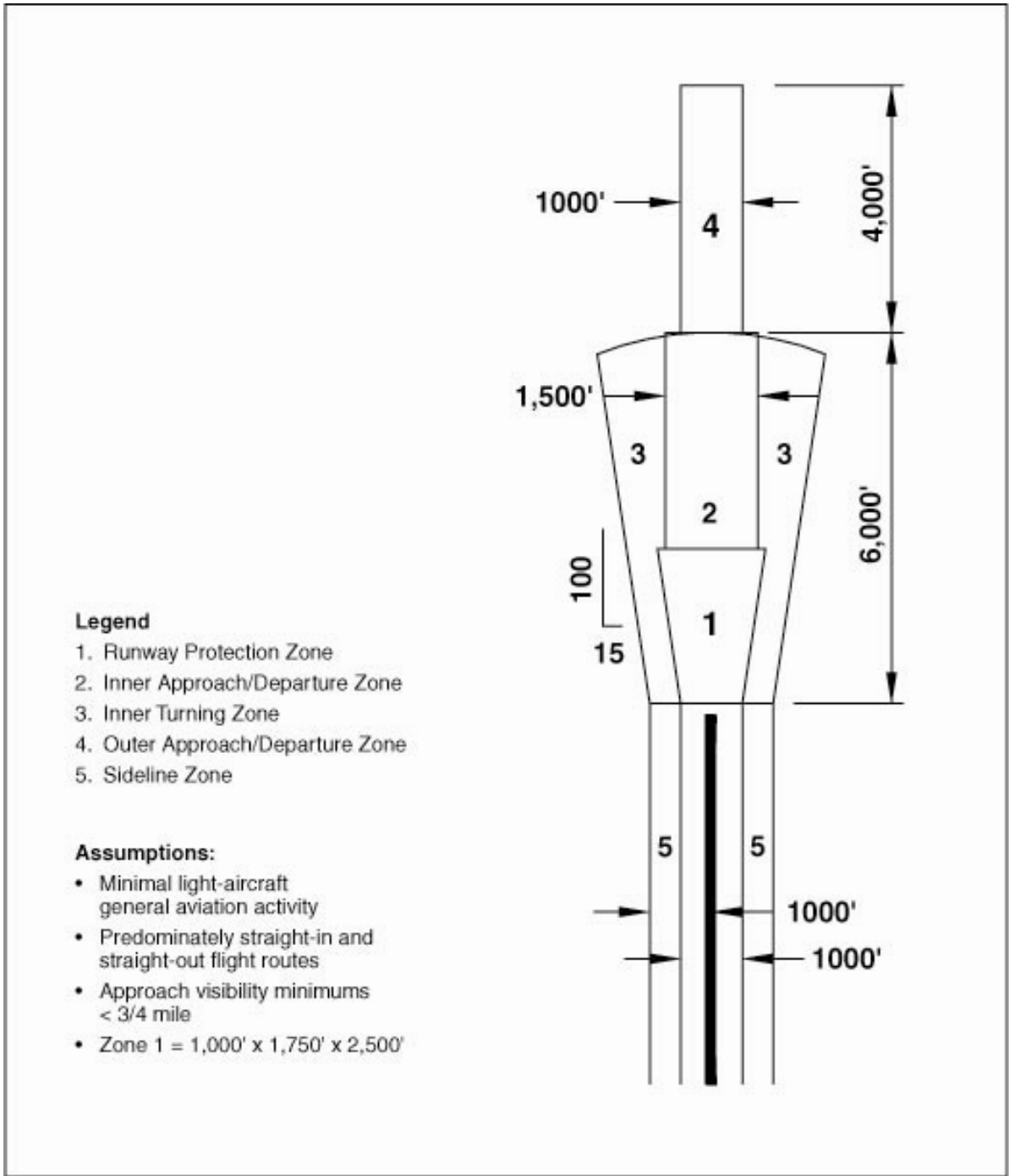
The 2011 *Handbook* advises that the shape of the safety zones should be adjusted whenever these conditions do not apply to a particular airport and runway.

Zone 1 (the runway protection zone) corresponds to the zone of the same name defined by FAA airport design criteria. The dimensions of the RPZ vary depending on the visibility minimums associated with the approach to the runway. Figure E-2 shows the dimensions of the largest type of RPZ. (Although Figure E-2 is taken from the 2002 *Handbook*, the 2011 *Handbook* provides the same guidance as the 2002 edition. As described in the 2011 *Handbook*, “evidence from analysis of the limited new data gathered for this [2011] edition was insufficient to conclude that the geographic distribution of accidents has significantly changed during the past decade compared to the pattern from the 1983-1992 period that served as the basis for the previously suggested zones.”<sup>4</sup>)

The other four zones are specific to the *Handbook* and are not directly related to any FAA standards or criteria. Each zone is defined according to a general assessment of the risk of accidents, with the risk generally decreasing in each successive zone.

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<sup>4</sup> California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, pg. 3-16.



Source: California Airport Land Use Planning Handbook, State of California Department of Transportation, Division of Aeronautics, prepared by Shutt Moen Associates, 2002.

Figure E2  
SAFETY ZONE EXAMPLE FOR LARGE AIR CARRIER RUNWAY

Comprehensive Airport Land Use Plan  
For The Environs of San Francisco International Airport

**C/CAG**  
City/County Association of Governments  
of San Mateo County, California  
CCAG200

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### **E.3.2 Safety Compatibility Land Use Guidelines**

The 2011 *Handbook* provides general land use compatibility guidance for each zone, as summarized in **Table E-1**. The guidelines are most restrictive in the highest risk zones and become progressively less restrictive. Land uses of greatest concern include: residential, institutions involving vulnerable populations (namely, children, the elderly, and the ill or injured), uses attracting large numbers of people, and uses involving intrinsic hazards (such as bulk fuel and toxic materials storage, and electrical substations).

The 2011 *Handbook* also provides land use density and intensity guidelines for each of the zones, shown in **Table E-2**. The guidelines suggest a maximum number of dwelling units per acre for residential uses and maximum number of people per gross acre for nonresidential uses. Greater densities may be permitted on a single acre as long as the overall density limits are maintained throughout the zone. Greater density may also be acceptable if risk-reduction measures are incorporated into building design (although this option is suggested only in the vicinity of airports used by small general aviation aircraft.)

The guidelines shown in Table E-2 are suggested for areas that are already highly urbanized. The 2011 *Handbook* also includes density and intensity guidelines for rural areas and suburban areas, but they are clearly inappropriate for the SFO vicinity. The 2011 *Handbook* considers a single set of standards that would apply uniformly in all settings to be impractical. It notes that, “more intensive development is often considered acceptable within urban areas because the costs of avoiding that development are greater than in rural areas.”<sup>5</sup> This is a concise way of conveying a key concept. Both land use regulation and the avoidance of risk inevitably involve tradeoffs. Land use regulatory decisions usually require a balancing of different societal objectives – between safe and pleasant residential neighborhoods and the need for commercial service and employment centers, for example. They also require the balancing of the welfare and safety of society with the rights of landowners to have a reasonable use of their property. Similarly, the reduction of risk ultimately involves an assessment of the costs or impacts or achieving a given level of risk avoidance.

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<sup>5</sup> California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, page 9-42.



Table E-1  
BASIC SAFETY COMPATIBILITY GUIDELINES

Risk/Operational Factors	Land Use Guidelines
<b>Zone 1: Runway Protection Zone (RPZ)</b>	
Very high risk	Avoid nonresidential uses except if very low intensity in character and confined to the outer sides; avoid parking lots, streets, and roads
Less than 200 feet above runway	Prohibit all new structures and residential land uses
Boundaries defined by FAA RPZ criteria	Airport ownership of property encouraged; uses on airport property subject to FAA standards
<b>Zone 2: Inner Approach/Departure Zone</b>	
Substantial risk	Normally allow agriculture; non-group recreational areas; low-hazard materials storage, warehouses; low-intensity light industrial uses; auto, aircraft, marine repair services
Low altitude overflights – 200 to 400 feet above runway elevation	Limit single-story office buildings; nonresidential uses to activities that attract few people
	Avoid all residential uses except as infill in developed areas; multi-story uses; uses with high density or intensity; shopping centers, most eating establishments
	Prohibit theaters, meeting halls and other assembly uses; office buildings greater than 3 stories; labor-intensive industrial uses; children’s schools, day care centers, hospitals, nursing homes; stadiums, group recreational uses; hazardous uses (e.g., aboveground bulk fuel storage)
<b>Zone 3: Inner Turning Zone</b>	
At GA airports, covers locations where aircraft are turning from base to final approach leg and descending from pattern altitude	Normally allow uses allowed in Zone 2; greenhouses, low-hazard materials storage, mini-storage warehouses; light industrial, vehicle repair services
Less than 500 feet above runway, particularly on landing	Limit residential uses to very low densities; office and other commercial uses to low intensities
Covers area where departures are beginning turns	Avoid hazardous uses (e.g., aboveground bulk fuel storage); commercial and other nonresidential uses with moderate to high usage intensities; buildings with more than 3 aboveground habitable floors
	Prohibit major shopping centers, theaters, meeting halls and other assembly facilities; children’s schools, large daycare centers, hospitals, nursing homes; stadiums, group recreation areas

Table E-1 (concluded)  
 BASIC SAFETY COMPATIBILITY GUIDELINES

**Zone 4: Outer Approach/Departure Zone**

<p>Approaching aircraft usually below pattern altitude; altitude less than 1,000 feet above runway</p> <p>Particularly applicable for runways with straight-in instrument approaches and straight-out flight paths</p>	<p>Normally allow uses allowed in Zone 3; restaurants, retail, industrial</p> <p>Limit residential uses to low density</p> <p>Avoid high-intensity retail or office buildings</p> <p>Prohibit children’s schools, large day care centers, hospitals, nursing homes; stadiums, group recreation areas</p>
--	--

**Zone 5: Sideline Zone**

<p>Not normally overflowed</p> <p>Primary risk is with aircraft losing directional control on takeoff</p> <p>Area usually on airport property</p>	<p>Normally allow Zone 4 uses (subject to height limitations for airspace protection); all common aviation-related activities provided that FAA height-limit criteria are met</p> <p>Limit nonresidential uses similarly to Zone 3</p> <p>Avoid residential uses unless airport related (noise usually also a factor); high-intensity non-residential uses</p> <p>Prohibit stadiums, group recreational areas; children’s schools, large day care centers, hospitals, nursing homes</p>
---	---

Definitions:

- Allow:* Use is acceptable
- Limit:* Use is acceptable only if density/intensity restrictions are met
- Avoid:* Use should not be permitted unless no feasible alternative is available
- Prohibit:* Use should not be permitted under any circumstances
- Children’s schools:* Through grade 12
- Large day care centers:* Commercial facilities defined in accordance with state law; family day care homes and noncommercial facilities ancillary to place of business are generally allowed
- Aboveground bulk storage of fuel:* Tank size greater than 6,000 gallons (based on Uniform Fire Code criteria which are more stringent for larger tanks)

Source: California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, Figures 4B to 4G, pages 4-20 to 4-25.

**Table E-2  
SAFETY COMPATIBILITY CRITERIA GUIDELINES**

Maximum Residential Density Safety Compatibility Zones (a)					
Current Setting	(1) Runway Protection Zone	(2) Inner Approach/ Departure Zone	(3) Inner Turning Zone	(4) Outer Approach/ Departure Zone	(5) Sideline Zone
<b>Average number of dwelling units per gross acre</b>					
Urban (heavily developed)	0	0	Allow infill at up to average of surrounding residential area		
Maximum Nonresidential Intensity Safety Compatibility Zones					
Current Setting	(1) Runway Protection Zone	(2) Inner Approach/ Departure Zone	(3) Inner Turning Zone	(4) Outer Approach/ Departure Zone	(5) Sideline Zone
<b>Average number of people per gross acre (a)</b>					
Urban (heavily developed)	0 (b)	60-80	100-150	150-200	100-150
<b>Maximum Number of People per Single Acre</b>					
Urban (heavily developed)	0	120-160	300-450	450-600	300-450
<p>(a) Also see Table E-1 for guidelines regarding uses which should be prohibited regardless of usage intensity.</p> <p>(b) Exceptions can be permitted for agricultural activities, roads, and automobile parking provided that FAA criteria are satisfied.</p> <p>Source: California Department of Transportation, Division of Aeronautics, <i>California Airport Land Use Planning Handbook</i>, October 2011, Figures 4B to 4G, pages 4-20 to 4-25.</p>					

#### **E.4 CURRENT LOCAL SAFETY REGULATIONS AND GUIDANCE**

The 1996 CLUP for SFO has only limited safety guidelines in the Airport vicinity. No safety zones are defined, but specific land uses and land use characteristics are recognized as hazards to air navigation and are to be avoided in the area.<sup>6</sup> They include:

<sup>6</sup> City/County Association of Governments of San Mateo County, *San Mateo County Comprehensive Airport Land Use Plan*, December 1996, Chapter V, p. V-19.

- Any use that would direct a steady or flashing light of white, red, green, or amber color toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in straight final approach toward a landing, other than FAA-approved navigational lights.
- Any use that would cause sunlight to be reflected toward an aircraft engaged in an initial straight climb following takeoff or engaged in straight final approach toward a landing.
- Any use that would generate smoke or rising columns of air.
- Any use that would attract large concentrations of birds within approach-climbout areas.
- Any use that would generate electrical interference that may interfere with aircraft communications or aircraft instrumentation.

A review of the planning and zoning documents of local municipalities did not reveal specific local laws or policies addressing airport safety-related land use or density requirements of the safety zones. The City of Millbrae does require density analysis of all development proposals. Such information could be used to consider whether proposed densities are compatible with the requirements of any safety zones that may be established in Millbrae.

## **E.5 APPLICATION OF STATE SAFETY ZONE EXAMPLE TO SFO**

The nominal configuration of safety zones presented in the 2011 *Handbook* and shown on Figure E-2 must be adjusted for application at SFO. As noted in the *Handbook*, the zones shown on Figure E-2 assume a precision instrument approach to the runway<sup>7</sup> and that “essentially all flights are flown straight in and out along the extended runway centerline. To the extent that any of these assumptions do not strictly apply to a specific airport, then modifications of the indicated zones should be considered.”<sup>8</sup>

The nature of the aircraft activity off the northwest and southwest runway ends, in particular, differs from the assumptions upon which the *Handbook’s* safety zones were based.

- South ends of Runways 1L-19R and 1R-19L:
  - RPZs off both runway ends are for visual approaches and are smaller than the RPZs shown in the example on Figure E-2. The boundaries of Zone 1 off these runway ends should reflect the actual size of the RPZs.

<sup>7</sup> State of California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-19.

<sup>8</sup> State of California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. 3-26.

- All departures on Runways 19L and 19R are required to make immediate left turns. Zone 3 should be modified to reflect this standard turn.
- Approaches to Runways 1L and 1R and departures on Runways 19L and 19R are very rare. Zone 4 is not needed off these runway ends.
- Given the infrequent use of these runway ends and the small RPZs, reductions in the size of Zones 2 and 3, the inner approach/departure zone and inner turning zone, merit consideration.
- West ends of Runways 10L-28R and 10R-28L:
  - Many departures on Runways 28L and 28R make immediate right turns to remain east of US-101. Zone 3 should be adjusted to reflect these turns.
- Size of Airport property: The Airport owns all property that would be within Zone 5 (the “sideline zone”). As such, the property is subject to strict land use restrictions imposed by the FAA on airport operators. Thus, Zone 5 need not be reflected in the CLUP.

**Figure E-3** depicts potential safety zone boundaries at SFO. On the west and south sides of the Airport, alternative boundaries are shown for the ITZs (Zone 3). On the south side, alternative boundaries are also shown for the IADZ (Zone 2). During the technical study and Project Advisory Committee (PAC) consultation process, the boundaries shown in light blue were proposed for initial discussion in Working Paper 2 but were later proposed to be eliminated. The boundaries shown in dashed blue were subsequently proposed for consideration based on the analysis presented below.

### **E.5.1 Flight Tracks**

The Airport Noise Office provided a two-day sample of flight tracks from January 2008, shown on Figure E-3. The sample was selected to capture operations on all runways. Two important factors influencing safety zone configuration are evident from the data:

1. Many of the departure turns off Runways 28L and 28R and 19L and 19R begin at or before the runway end and fly over close-in areas that would not have been covered by the original versions of the ITZ (shown in light blue).
2. No departure turns or arrivals occur over the south ITZ off the departure ends of Runways 28L and 28R or over the west ITZ off the departure ends of Runways 19L and 19R.

These observations provide the basis for two sets of revisions to the safety zones, as indicated by the dashed blue lines.

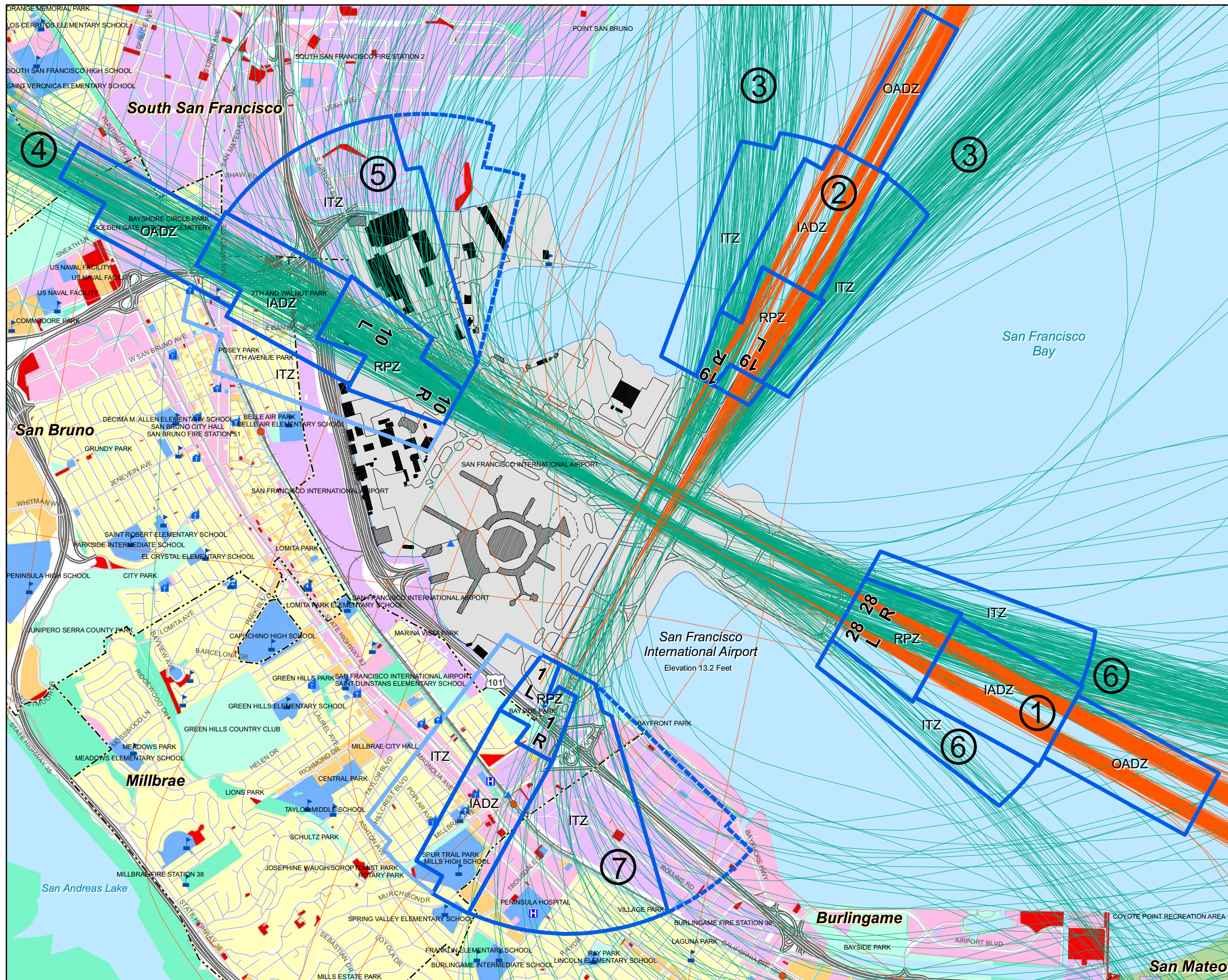
- Off the departure ends of Runways 28L and 28R, the north ITZ boundary should be fanned further to the north (a total of 75 degrees from centerline heading) to capture the area overflowed by aircraft taking the Shoreline Departure. The south ITZ should be eliminated as it is not overflowed at all.
- Off the departure ends of Runways 19L and 19R, the east boundary of the east ITZ should be fanned further to the east to reflect the location of departure overflights. The west ITZ should be eliminated since no right turns are made by departures on Runways 19L and 19R. (Figure E-3 shows the boundary fanned 75 degrees from centerline heading. After further study and discussion, it was decided to fan the boundary 70 degrees east of centerline heading.)

### **E.5.2 Runway Use**

The density of flight tracks presented in Figure E-3 provides an indication that the south end of the Runway 1-19 system is used less frequently than the west end of the Runway 10-28 system. Runway use data maintained by the Airport Noise Office verify that this is indeed true. The question of whether the safety zone boundaries should be altered to reflect the differences in runway use merits discussion.

Table 3A in the 2011 *Handbook* (p. 3-22) discusses operational factors that deserve consideration in determining whether to adjust safety zone boundaries. Among these factors are runways used predominantly in one direction. The guidelines suggest that when one runway end is used only rarely, by less than approximately 2,000 operations per year, safety zone adjustments may be warranted.

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**LEGEND**

- BART Station
- CALTRAIN Station
- School
- Place of Worship
- Hospital
- Vacant
- Public
- Multi-Family Residential
- Single Family Residential
- Retail
- Industrial, Transportation, and Utilities
- Local Park, Golf Course, Cemetery
- Regional Park or Recreation Area
- Open Space
- Airport Property
- Municipal Boundary
- Railroad
- Freeway
- Road

**Safety Zones**

- IADZ - Inner Approach/Departure Zone
- ITZ - Inner Transitional Zone
- OADZ - Outer Approach/Departure Zone
- RPZ - Runway Protection Zone
- Potential expansion of ITZ
- Potential elimination of ITZ

**Flight Tracks**

- Arrivals
- Departures

- ① Typical West Flow arrival pattern, Runways 28L and 28R.
- ② South/East Flow arrival pattern, Runways 19L and 19R.
- ③ Typical East Flow departures, Runways 1L and 1R.
- ④ Typical West Flow heavy jet departures, Runways 28L and 28R.
- ⑤ Shoreline One instrument departure procedure, Runways 28L and 28R with right turn.
- ⑥ South/East Flow departures, Runways 10L and 10R.
- ⑦ South/East Flow departures, when excessive crosswind precludes use of 10-28 system, Runways 19L and 19R with immediate left turn to avoid terrain.

Land Use Data Source:  
San Mateo County Planning & Building Department 2007

Flight track data source:  
SFO Aviation Department, Noise Office.  
Data for January 1 and 5, 2008.

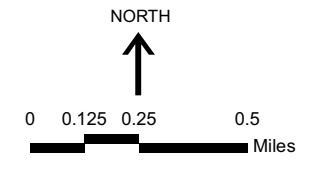


Figure E-3  
**POTENTIAL ADJUSTMENTS TO SAFETY COMPATIBILITY ZONES**  
Comprehensive Airport Land Use Plan  
For The Environs of San Francisco International Airport  
**C/CAG**  
City/County Association of Governments  
of San Mateo County, California



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This situation applies at SFO, where the south end of the Runway 1-19 system is seldom used. **Table E-3** shows average annual runway use percentages at SFO and annual operations by runway end for 2008 and forecasted 2025 conditions. (A review of runway use data from the 1990s, reported in the 1998 *Federal Aviation Regulation Part 161.205 Study, Final Report*, indicates that these percentages have remained similar for many years.) Operations off the south end of the Runway 1-19 parallel system are indicated by arrivals to Runways 1L and 1R and departures from Runways 19L and 19R.

Runway 1L is used for arrivals only 0.01% of the time, with 21 arrivals in 2008 and 30 projected for 2025. Runway 1R is used 0.06% of the time, with 112 arrivals in 2008 and 160 projected for 2025. Runway 19L is used for 0.14% of departures, with 263 in 2008 and 361 projected for 2025. Runway 19R is used for 0.29% of departures, with 549 in 2008 and 754 projected for 2025. Thus, in 2008 945 operations occurred over the area south of the runway. This is projected to increase to 1,305 in 2025.

(Note that although Runways 10L and 10R are also used very rarely for approaches, only 0.37% and 0.11%, respectively, Runways 28L and 28R are used frequently for departures - 13.46% and 11.34%, respectively.)

Table E-3  
RUNWAY USE PERCENTAGES AND OPERATIONS BY RUNWAY  
San Francisco International Airport

Runway	Average Annual Use		Annual Operations			
			2008		2025	
	Approach	Departure	Arrivals	Departures	Arrivals	Departures
1L	0.01%	27.43%	21	52,439	30	72,018
1R	0.06	42.34	112	80,949	160	111,172
10L	0.37	1.96	681	3,748	971	5,147
10R	0.11	3.05	196	5,836	279	8,015
19L	3.91	0.14	7,211	263	10,277	361
19R	0.58	0.29	1,063	549	1,515	754
28L	38.01	13.46	70,028	25,733	99,806	35,341
28R	<u>56.95</u>	<u>11.34</u>	<u>104,937</u>	<u>21,691</u>	<u>149,559</u>	<u>29,790</u>
Totals	100.00%	100.00%	184,249	191,208	262,597	262,597

Sources: San Francisco International Airport Noise Office, runway use and operations data for 2008, for fixed wing aircraft only. Forecast 2025 from FAA's 2008 Terminal Area Forecast. Note that SFO's own forecasts may differ from FAA's forecast.

The first set of safety zone boundaries for the south end of Runways 1L and 1R-19L and 19R that were presented to the PAC for discussion, and which were distributed in Working Paper 2, were adjusted from the state's standard guidelines in the following ways:

1. Runway protection zones (RPZs) were based on the standards for visual approach runways, the actual RPZs at SFO.
2. The width of the IADZ was narrowed to 1,000 feet (from the standard of 1,500 feet) to correspond to the outer width of the visual RPZs.
3. The OADZ was eliminated given the absence of a precision instrument approach to Runways 1L and 1R, and the very few arrivals to the runways.

After initial discussions of the safety zones with the PAC, the detailed runway use data Table E-3, above, were obtained and analyzed. One additional set of modifications was then proposed, as indicated by the dashed blue lines on Figure E-3. The length of the IADZ and ITZ were shortened in recognition of the very light use of the runways, similar to the way the RPZ is shortened based on the FAA’s visual runway approach standards.

The dimensions of the instrument approach RPZ are compared to the visual approach RPZ in **Table E-4**. A visual RPZ is 68% as long as an instrument RPZ. If this same relationship were applied to the length of the IADZ and TPZ, which is 6,000 feet per the state’s standard guidelines presented in Figure E-2, it would yield a length of 4,080 feet.

	RPZ Dimensions (in feet)		
	Inner Width	Outer Width	Length
Instrument Runway	1,000	1,750	2,500
Visual Runway	500	1,010	1,700
Visual RPZ as Percent of Instrument RPZ	50.0%	57.7%	68.0%

Because the RPZ dimensions are driven by the type of approach to the runway, and because most of the operations off the south end of the Runway 1-19 system are departures, caution is warranted in adjusting the length of the IADZ and ITZ. A length of 5,000 feet, midway between the state’s standard guideline and the computed length based on the ratio of RPZ lengths, is recommended. This is the length of the IADZ and TPZ off the south end of the Airport shown on Figure E-3.

## **E.6 EXISTING LAND USE AND POTENTIAL SAFETY INCOMPATIBILITIES**

Figure E-3 shows that, for all but one runway end, the RPZ (Zone 1) is either on airport property, over public highway right-of-way, or over the Bay. (The outer edge of the RPZ off the south end of Runway 1R-19L extends onto property not owned by the Airport.) The IADZ (Zone 2) and ITZ (Zone 3) for Runways 1L and 1R extend off airport property to the southwest onto land within Millbrae and Burlingame. The IADZ, ITZ, and OADZ (Zones 2, 3, and 4, respectively) for Runways 10L and 10R extend off the property to the northwest into San Bruno and South San Francisco.

Within the safety zones extending off Airport property, there appear to be some existing land uses that would be considered incompatible based on the 2011 *Handbook*, as presented in Tables E-1 and E-2, above. Existing retail and residential land uses in the IADZ for Runways 1L and 1R are not consistent with the recommendations in the 2011 *Handbook*. In the ITZ and OADZ for all runways, it is generally not possible to pinpoint which existing non-residential uses in the safety zones exceed the building and occupancy densities suggested in the 2011 *Handbook* without detailed field checking. One specific land use that is located partially within the ITZ off the south end of Runway 1R-19L does not meet the 2011 *Handbook* guidelines, due to occupancy intensity and care of a low-mobility population. This is the Mills-Peninsula Hospital in Burlingame, due south of the runway end.

SFO is surrounded on three sides by open water and wetlands, which are uses that attract birds. These are obviously not the result of inappropriate land use decisions, but a result of the natural setting and a societal decision to promote wetlands preservation.

In interviews undertaken by the consultant, neither the Airport nor local jurisdictions identified any incompatible sources of glare or other visual hazards, smoke, or electromagnetic interference in the study area.

## **E.7 FUTURE LAND USE CHANGES**

A seismic retrofit and redevelopment of the Mills-Peninsula hospital is currently underway that, when complete, will shift the facility further toward the northeast edge of the property. (See image, below, of current and redevelopment sites.)

In the future, infill development may increase densities, making some land uses potentially incompatible from a safety perspective. Several promising redevelopment areas around the Airport fall into parts of the IADZ, ITZ, and OADZ safety zones. These include parts of downtown Millbrae, the TOD areas around the joint BART and Caltrain station in Millbrae, and the Caltrain station in San Bruno, near South San Francisco. At the latter, the safety zones fall within the CNEL 70 dB contour, and are therefore restricted from being developed for new residential development. It is likely that redevelopment will be proposed in these



*Mills-Peninsula Hospital, showing excavated area for new construction.*

areas at greater densities and intensities than recommended by the 2011 *Handbook*, and possibly at higher densities and intensities than exist today. For example, Millbrae officials explained to the consultant that in order to for redevelopment projects to be financially feasible, developers and planners are exploring the potential to redevelop key sites in the downtown area with increased densities. It is unclear whether such proposals will be approved, but guidance in the CLUP would help local planners understand the airport compatibility implications of these proposals.

In the industrial areas of many of the jurisdictions, it is possible that certain industrial uses that produce smoke or steam or reflective building treatments could be proposed and built in the future. Currently, few if any local regulations would prevent such potentially incompatible land uses. Although many local government staff members may be aware of the need to consider such possible impacts, there appear to be few, if any, regulatory requirements those local planning jurisdictions can follow to avoid impacts on the Airport in reviewing or approving such uses.

## **E.8 FUTURE CHANGES TO ACCIDENT RISK**

Significant changes to the risk of accidents in the safety zones are unlikely in the lifetime of the next CLUP. The risk of commercial accidents is already quite small. The continued development of improved navigational aids, radar and aircraft situation monitoring equipment, and safety-related aircraft and engine technologies are likely to further reduce accidents risks (on a per-flight basis).

At the same time, increases in the number of flights, increases in peak period operations, and a trend toward an increased proportion of larger aircraft in the local fleet may, at the margins, counter some of the anticipated improvements in accident risk reduction. On the whole, there is no reason to anticipate changes in accident risk in the area.

## **E.9 POTENTIAL SAFETY COMPATIBILITY POLICIES FOR SFO SAFETY ZONES**

Three alternative sets of compatibility policies were developed for consideration in the SFO CLUP update process.

### **E.9.1 Policy Alternative 1 – State Guidelines as Local Standards**

The first alternative would involve the adoption of the guidelines in the 2011 *Handbook* as local standards in the updated CLUP. Those standards are described in Tables E-1 and E-2, above. They would involve strict limits on the development of new housing, schools, hospitals, nursing homes, and high-occupancy commercial, institutional, and industrial uses.

Property within the suggested SFO safety zones is nearly fully developed and includes many uses that would not comply with the State guidelines. Further, the safety zones lie over the Caltrain/BART station in Millbrae and the BART station in San Bruno. These transit stations are the focal points of specific plans in both cities that are intended to promote the development of relatively high density, transit-oriented development. Thus, application of the state guidelines would directly conflict with longstanding community objectives which have been backed by substantial public and private investment. (The Shops at Tanforan and San Bruno Towne Center, for example, have been developed near the San Bruno BART station.) In the discussion of this situation at the third meeting of the Project Advisory Committee (PAC), committee members, staff, and consultants tended to believe that this policy alternative could not be meaningfully applied given the state of existing development and other regional and state planning requirements.

### **E.9.2 Policy Alternative 2 – Restriction of Potentially High Risk Land Uses**

In recognition of the large-scale development that has already occurred in the Airport vicinity, the second alternative would include only new policies to prevent or limit the development of a small range of uses that could subject the public to especially serious consequences in case of an accident or that would affect the most highly vulnerable segments of the population. Those uses include children's schools, large day care centers, hospitals, nursing homes, hazardous uses (such as aboveground fuel storage or facilities for the storage of explosives or toxic chemicals), and critical public utilities. See **Table E-5**, below.

Alternative 2 also has shortcomings. The most serious is that it implicitly assumes that very little future development or redevelopment would occur in the safety areas. In fact, local communities are actively planning for substantial redevelopment in selected areas, particularly related to transit-oriented development, new housing development in obsolete commercial and institutional areas, and new office/commercial/industrial development in obsolete industrial areas. With the potential for substantial redevelopment in the Airport vicinity, the very short list of uses that would be restricted under this alternative would leave the door open to a variety of high intensity uses that could be problematic.

Table E-5  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 2 – RESTRICTION OF POTENTIALLY  
HIGH RISK LAND USES

Risk/Operational Factors	Land Use Standards	
	Prohibit	Avoid
<b>Zone 1: Runway Protection Zone (RPZ)</b>		
Very high risk	All new structures	Nonresidential uses except very low intensity uses on sides and outer end of area.
Boundaries defined by FAA RPZ criteria. Airport ownership of property encouraged	Places of assembly	
	Fuel Storage	
	Wildlife attractants	
<b>Zone 2: Inner Approach/Departure Zone (IADZ)</b>		
Substantial risk	Children’s schools, day care centers, hospitals, nursing homes.	---
Low altitude overflights – 200 to 400 feet above runway elevation	Hazardous uses (e.g., aboveground bulk fuel storage)	
	Critical public utilities	
<b>Zone 3: Inner Turning Zone (ITZ)</b>		
Covers area where departures are beginning turns	Children’s schools, large day care centers, hospitals, nursing homes	Hazardous uses (e.g., aboveground bulk fuel storage)
		Critical public utilities
<b>Zone 4: Outer Approach/Departure Zone (OADZ)</b>		
Approaching aircraft usually below pattern altitude	Children’s schools, large day care centers, hospitals, nursing homes.	Hazardous uses (e.g., aboveground bulk fuel storage)
Particularly applicable for runways with straight-in instrument approaches and straight-out flight paths		Critical public utilities
<b>Zone 5: Sideline Zone – not applicable; entirely on Airport property</b>		
<b>Zone 6: Traffic Pattern Zone – not applicable given lack of VFR traffic using typical traffic pattern</b>		

Table E-5 (concluded)  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 2 – RESTRICTION OF POTENTIALLY HIGH RISK LAND USES

Definitions:

*Avoid:* Use should not be permitted unless no feasible alternative is available

*Prohibit:* Use should not be permitted under any circumstances

*Children's schools:* Through grade 12

*Large day care centers:* Commercial facilities defined in accordance with state law; family day care homes and noncommercial facilities ancillary to place of business are generally allowed

*Critical public utilities:* Facilities that, if disabled by an aircraft accident, could lead to public safety or health emergencies. Examples include electrical power generation plants, electrical substations, wastewater treatment plants, and public water treatment facilities.

*Hazardous uses:* Uses that would substantially aggravate the consequences of an aircraft accident. They include manufacturing or storage of large quantities of flammable, explosive, or poisonous materials.

*Aboveground bulk storage of fuel:* Tank size greater than 6,000 gallons (based on Uniform Fire Code criteria which are more stringent for larger tanks)

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Source: Jacobs Consultancy, 2008. Based on California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, 2002, Table 9B, page 9-44.

### E.9.3 Policy Alternative 3 – Hybrid of Alternatives 1 and 2

This alternative would retain the policies of Alternative 2, but supplement them by restricting a variety of other uses in the IADZ, ITZ, and OADZ zones which could expose the public to unacceptable hazards in case of aircraft accidents. Although this alternative would not include the occupancy density criteria of Alternative 1, it would indirectly limit occupancy by limiting building heights to three stories and by restricting several especially high occupancy uses. These standards are described in **Table E-6**.

The following uses would be prohibited in the IADZ, ITZ, and OADZ:

- Children's schools, day care centers, hospitals, nursing homes
- Stadiums, arenas

In the IADZ and OADZ, buildings with more than three aboveground habitable floors also would be prohibited. In the ITZ, buildings with more than four aboveground habitable floors would be prohibited.



Table E-6  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 3 – HYBRID OF ALTERNATIVES 1 AND 2

Risk/Operational Factors	Land Use Standards	
	Prohibit	Avoid
<b>Zone 1: Runway Protection Zone (RPZ)</b>		
Very high risk	All new structures	Nonresidential uses except very low intensity uses* on sides and outer end of area.
Boundaries defined by FAA RPZ criteria.	Places of assembly	
	Fuel Storage	
	Wildlife attractants	
<b>Zone 2: Inner Approach/Departure Zone (IADZ)</b>		
Substantial risk	Buildings with more than three aboveground habitable floors	--
Low altitude overflights - 200 to 400 feet above runway elevation	Children’s schools, day care centers, hospitals, nursing homes	
	Stadiums, arenas	
	Residential uses, except on existing lots of record and provided that dwelling unit density is no greater than average density within 1,000 feet of the lot	
	Auditoriums, meeting halls, theaters	
	Retail shopping centers, big box retail stores	
	Hotels	
	Hazardous uses	
	Critical public utilities	
<b>Zone 3: Inner Turning Zone (ITZ)</b>		
Area where departures are beginning turns	Buildings with more than four aboveground habitable floors	Hotels
	Children’s schools, large day care centers, hospitals, nursing homes	Hazardous uses
	Stadiums, arenas	Critical public utilities
	Residential uses, except on existing lots of record and provided that dwelling unit density is no greater than average density within 1,000 feet of the lot	
	Auditoriums, meeting halls, and theaters seating more than 600 people	

Table E-6 (concluded)  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 3 – HYBRID OF ALTERNATIVES 1 AND 2

Risk/Operational Factors	Land Use Standards	
	Prohibit	Avoid
<b>Zone 4: Outer Approach/Departure Zone (OADZ)</b>		
Approaching aircraft usually below pattern altitude	Buildings with more than three aboveground habitable floors	Hotels Hazardous uses
Particularly applicable for runways with straight-in instrument approaches and straight-out flight paths	Children’s schools, large day care centers, hospitals, nursing homes Stadiums, arenas Residential uses, except on existing lots of record and provided that dwelling unit density is no greater than average density within 1,000 feet of the lot Auditoriums, meeting halls, and theaters seating more than 400 people	Critical public utilities

**Zone 5: Sideline Zone – not applicable; entirely on Airport property**

**Zone 6: Traffic Pattern Zone – not applicable; lack of VFR traffic using typical traffic pattern**

**Definitions:**

*Avoid:* Use should not be permitted unless no feasible alternative is available. Where use is allowed, habitable structures should be provided with at least 50 percent more exits than required by applicable codes.

*Prohibit:* Use should not be permitted under any circumstances

*Children’s schools:* Through grade 12

*Large day care centers:* Commercial facilities defined in accordance with state law; family day care homes and noncommercial facilities ancillary to place of business are generally allowed

*Critical public utilities:* Facilities that, if disabled by an aircraft accident, could lead to public safety or health emergencies. Examples include electrical power generation plants, electrical substations, wastewater treatment plants, and public water treatment facilities.

*Hazardous uses:* Uses that would substantially aggravate the consequences of an aircraft accident. They include manufacturing or storage of large quantities of flammable, explosive, or poisonous materials and aboveground bulk storage of fuel.

*Aboveground bulk storage of fuel:* Tank size greater than 6,000 gallons (based on Uniform Fire Code criteria which are more stringent for larger tanks)

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\*Examples include parking lots and outdoor equipment storage.

Source: Jacobs Consultancy Team, 2009. Based on California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, 2002, Table 9B, page 9-44.

Although residential use ideally would be prohibited in the IADZ, OADZ, and ITZ zones, established neighborhoods are already present in all zones. Thus, new residential would be permitted, but only on existing lots of record and only if the density of new development was comparable to existing residential development.

Auditoriums, meeting halls, and theaters would be restricted in all three zones, with the degree of restriction lessening with the declining risk in each zone. These uses would be prohibited in the IADZ, limited to maximum seating capacity of 400 in the OADZ, and limited to a capacity of 600 in the ITZ.

Three other uses would be prohibited in the IADZ: hotels, hazardous uses, and critical public utilities. These uses should be avoided, although they would not be prohibited, in the ITZ and OADZ. This means that they should not be permitted unless no feasible alternative is available. Where permitted, the occupied buildings should be provided with additional exits.

## **E.10 EFFECT OF POLICY ALTERNATIVE 3 ON LOCAL MUNICIPALITIES**

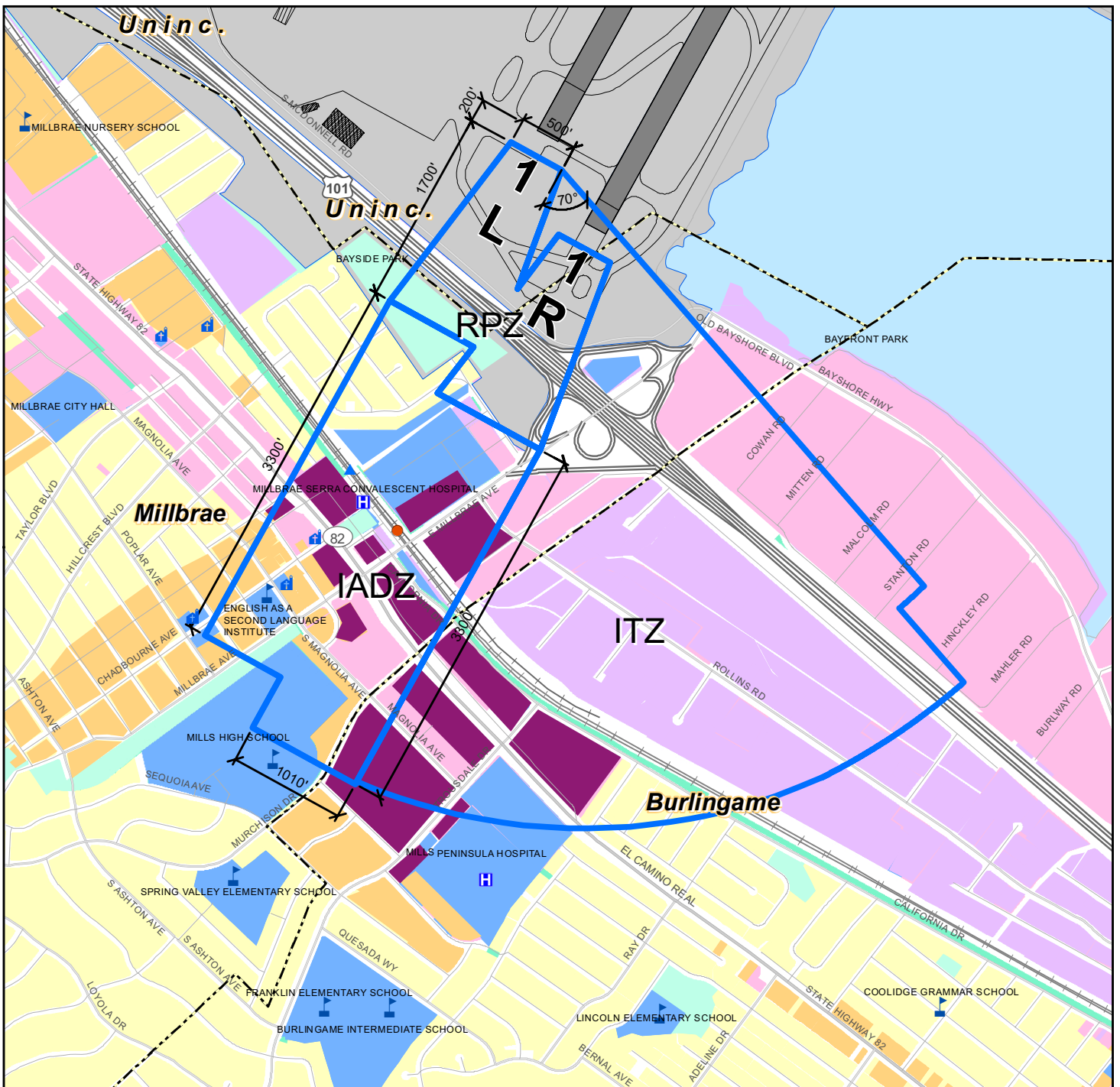
This section discusses the potential impact of Policy Alternative 3 on each of the four affected municipalities and unincorporated San Mateo County, given the suggested safety zone boundaries, shown on Figure E-3 and in greater detail on **Figures E-4** and **E-5**.

### **E.10.1 Effect in Burlingame**

Figure E-3 shows existing land use and the proposed safety zones. Burlingame would be affected primarily by the ITZ (Zone 3, the inner turning zone).<sup>9</sup> Most of the area inside the ITZ is developed for retail or other commercial or industrial uses. At the outer edge of the ITZ between the he railroad tracks and El Camino Real is a small part of a single-family residential neighborhood. A small strip on the east side of Murchison Drive, south of El Camino Real (State Highway 82) is in the IADZ (Zone 2, the inner approach/departure zone). This area includes commercial development. Although the parts of Burlingame within the safety zones are almost fully developed, it is possible that redevelopment projects could be proposed in these areas.


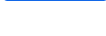

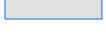
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<sup>9</sup> Note that Figure E-4 depicts an interim northern boundary for the ITZ, which is fanned 75 degrees east of the runway heading. The final boundary, depicted on Figures 4-4 and 4-6 in Chapter 4 is fanned 70 degrees east of the runway heading.









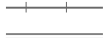



**LEGEND**

**Safety Compatibility Zones**

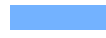





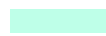

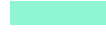

-  RPZ - Runway Protection Zone
-  IADZ - Inner Approach/Departure Zone
-  ITZ - Inner Turning Zone
-  OADZ - Outer Approach/Departure Zone

**Airport Property**

-  BART Station
-  CALTRAIN Station
-  School
-  Place of Worship
-  Hospital

-  Municipal Boundary
-  Railroad
-  Freeway
-  Major Road
-  Road

**Planned Land Use Per General Plans**

-  Public
-  Multi-Family Residential
-  Single Family Residential
-  Mixed Use
-  Transit Oriented Development
-  Commercial
-  Industrial, Transportation, and Utilities
-  Local Park, Golf Course, Cemetery
-  Regional Park or Recreation Area
-  Open Space

NORTH

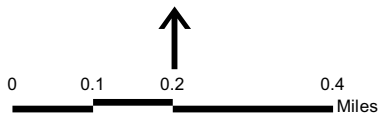


Figure E-4  
**SAFETY COMPATIBILITY ZONES**  
 IN THE CITIES OF MILLBRAE AND BURLINGAME  
 Comprehensive Airport Land Use Plan  
 For The Environs of San Francisco International Airport  
**C/CAG**  
 City/County Association of Governments  
 of San Mateo County, California

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### ***E.10.1.1 Relationship of Safety Standards to Local Plans***

Figure E-4 presents the safety zones in relation to future land use, based on applicable general and specific plans. All of Burlingame within the proposed safety zones is subject to specific plans. The area between US 101 and the Bay, referred to as the Inner Bayshore Area, is covered by the Burlingame Bayfront Specific Plan. That plan calls for office, warehouse, and light manufacturing uses through most of the area within the ITZ. The design guidelines promote low-rise development, similar to the current character of the area. This is generally consistent with the proposed land use standards in Table E-6.

The portion of the Inner Bayshore Area with frontage on Bayshore Highway and facing the Bay is designated for restaurants, hotels, and retail. This frontage would be unaffected by the proposed safety standards as it is outside the ITZ.

The North Burlingame-Rollins Road Specific Plan covers nearly all of the rest of Burlingame within the ITZ and IADZ. The area northeast of the railroad tracks is designated for industrial, office, and auto dealerships. This is generally consistent with the proposed safety standards.

Southwest of the railroad tracks, the Specific Plan calls for a mix of office, retail, multi-family residential and medical uses related to Mills Peninsula Hospital. Residential densities of up to 40 units per acre are proposed. The proposed safety standards would conflict with the policies of the Specific Plan as they relate to multi-family residential use. Whereas the safety standards are aimed at sharply limiting residential development in the IADZ and ITZ, the Specific Plan promotes high density residential as a part of a mixed use development concept. The safety standards would also restrict development of meeting halls, theaters, hotels, hospitals and nursing homes, uses that would be permitted by the Specific Plan.

### ***E.10.1.2 Potential Nonconforming Uses***

A comprehensive land use inventory within the proposed safety zones has not been undertaken, so complete information about the number and extent of nonconforming uses is unknown. The following uses, which would be nonconforming with the policies of Safety Alternative 3, are known to be in the proposed ITZ:

- Mills Peninsula Hospital (northern edge) - nonconforming use and height (9 stories)
- Clarion and Westin Hotels (northeast of US 101 between Millbrae Avenue and Murchison Drive) - nonconforming height (taller than 4 stories)

Nonconforming use policies should be addressed in the CLUP. Two alternative sets of nonconforming use policies are suggested for consideration:

**Nonconforming Use Policy Alternative 1** – Prohibit all expansions of nonconforming uses.

For residential uses, “expansion” shall be measured by the number of dwelling units on the lot.

- a. For nonresidential uses, “expansion” shall be measured by the lot and building area.

**Nonconforming Use Policy Alternative 2** – Prohibit expansion of residential nonconforming uses and permit expansions of nonresidential nonconforming uses, subject to the following conditions:

- Expansion shall not increase the total occupied area of the building by more than 25%.
- Expansion shall not increase the number of occupied aboveground floors above three.
- Provision of at least 50% more emergency exits than would otherwise be required by the building or fire code.

## **E.10.2 Effect in Millbrae**

Figure E-3 shows that parts of Millbrae are inside the ITZ and the RPZ near the Millbrae Avenue exit on US 101. Most of the affected part of Millbrae is in the IADZ, directly along the extended centerlines of the two runways. As in Burlingame, most of the land in the safety zones in Millbrae is fully developed. From Magnolia Avenue northeast to the Airport, most of the development is a mix of commercial or industrial, although a single-family residential area lies just beyond the RPZ between Bayside Park and the railroad. The Millbrae BART/Caltrain station is near the center of the IADZ. A hospital is just northeast of the station. A mix of single-family and multi-family residential with two schools is southwest of Magnolia.

### ***E.10.2.1 Relationship of Safety Standards to Local Plans***

Figure E-4 presents the safety zones in relation to future land use, based on applicable general and specific plans. The Millbrae General Plan designates the area in the ITZ northeast of US 101 for industrial, utility, and general commercial uses. This is generally consistent with the standards suggested in Table E-6, provided that structures remain below three stories in height and that the selected high-occupancy uses are avoided.

The General Plan also proposes the preservation of the existing residential neighborhood in the IADZ between Bayside Park and the railroad tracks. This would be consistent with the standards suggested in Table E-6 as long as any

residential redevelopment maintained the same densities as currently exist in the neighborhood.

The Millbrae Station Area Specific Plan applies to the balance of the area in the IADZ and ITZ. From Rollins Road northeast to US 101, the specific plan proposes general commercial use. The permitted uses in this area, which include service commercial, retail, restaurants, light manufacturing, warehousing and distribution, and auto sales, are nominally consistent with the standards in Table E-6, provided that the selected high occupancy uses are avoided. The Specific Plan limits building heights in this area to 30 to 45 feet - two to three stories - which is generally consistent with Table E-6.

From Rollins Road southwest to the outer edge of the IADZ, the Specific Plan proposes a relatively high density, mixed use development plan to take full advantage of proximity to the transit station. Hotels are among the proposed uses. Building heights of up to 75 feet are also proposed. Although many proposed land uses in this area would be consistent with the standards proposed in Table E-6, the overall intensity of development is inconsistent with the proposed safety standards. The maximum building heights and the hotel proposals are particularly problematic. Placement of the transit station in the center of the IADZ has given rise to the conflicts. From the city's perspective, taking full advantage of the development opportunities afforded by the transit station only makes sense. On the other hand, the area covered by the Specific Plan lies less than one mile off the end of a runway at a major international airport.

#### ***E.10.2.2 Issues in the RPZ***

Within the RPZ, the standards in Table E-6 would allow no new structures. Ideally, the RPZ would be entirely on Airport property. A small part of the Runway 1L RPZ extends off Airport property into Bayside Park. A small part of the outer edges of the Runway 1R RPZ is over residential and industrial property, although the industrial property is occupied by a parking lot, which is an acceptable use at the edge of the RPZ.

The requirement to prevent structures would pose no difficulties when applied to park land, as it is already in public ownership. This requirement, however, is a problem over privately owned land, as it may be claimed to amount to a taking of property without just compensation.

The private property within the RPZ is developed, so this issue would only arise if redevelopment is proposed in the future. Modifications to the nominal RPZ standards in Table E-6 merit consideration to provide adequate protection to the public while complying with constitutional requirements. Three alternatives are suggested.

- **RPZ Policy Alternative 1, Transfer of Development Rights:** A policy prohibiting redevelopment of the property but allowing the transfer of



development rights (TDR) from this property to other properties could be adopted. Implementation of this policy would require the adoption of a specific ordinance by the City of Burlingame. The TDR program would prohibit the redevelopment of the property in the RPZ, but it would allow the owner to sell to a developer or property owner in the receiving zone development rights allowing the buyer to build to a higher density than would otherwise be permitted by the standard zoning classification of the receiving property. The receiving zone should be established outside any of the airport safety zones.

- **RPZ Policy Alternative 2, Modified RPZ Land Use Standards:** This alternative would modify the standards for the RPZ safety zone suggested in Table E-6. The modified standards, which are presented in **Table E-7**, would clearly prohibit land uses posing the most potentially serious problems in the RPZ. Permitted uses would be limited to nonresidential development, one story in height, with limits on maximum occupancy levels. In addition, the granting of an aviation easement to the City and County of San Francisco would be required (if easements have not already been secured by the City and County). The maximum occupancy limit is based on guidance in the 2011 *Handbook* (Figures 4B to 4G, pages 4-20 to 4-25). Specifically, it is the lower limit of the maximum density recommended for the IADZ in heavily developed urban areas.
- RPZ Policy Alternative 3, Hiatus on Processing Redevelopment Applications

Table E-7  
 RPZ ALTERNATIVE 2: POTENTIAL MODIFICATIONS TO SAFETY COMPATIBILITY POLICIES  
 FOR ZONE 1 - RPZ

Zone 1: Runway Protection Zone (RPZ)  
 Land Use Standards

Prohibited Uses	Permitted Uses	Conditions
Residential uses Children’s schools, day care centers, hospitals, nursing homes Hazardous uses (e.g., above-ground bulk fuel storage) Critical public utilities Auditoriums, meeting halls, and theaters Gasoline and fueling service stations	Nonresidential uses, subject to stated conditions	Single story construction Maximum occupancy density of 40 people per gross acre (a) Granting of an avigation easement to the City and County of San Francisco, as owner and operator of the Airport

(a) Gross acreage is the total size of the parcel that is developed, including parking and open space areas. Occupancy density is to be determined based on the building and fire codes. In case of a conflict between the two codes, the more restrictive shall control.

As previously discussed, the FAA advises airport operators to own all land within the RPZs if at all possible. A policy could be included in the CLUP to afford the Airport an opportunity to purchase the few remaining parcels of private property in the RPZ is the property owners ever propose redevelopment. Such a policy could be written as follows:

Upon receipt of a complete application for development approval for any property located in a Runway Protection Zone (RPZ), the local jurisdiction with development permitting authority shall refrain from issuing a development permit for a period of at least 45 days. The local permitting agency shall immediately forward to the Airport a copy of the development application. The 45-day hiatus in the issuance of development permits enables the Airport, at its discretion, to negotiate with the owner of the subject property the purchase of the property or sufficient rights to the property to prevent construction of the offending structure. If, at the conclusion of the 45-day hiatus, the project applicant still seeks approval of the development permit application, the local permitting authority may resume consideration of the project sponsor’s application, subject to the policies presented in Table E-7, above.

### ***E.10.2.3 Potential Nonconforming Uses***

While a comprehensive land use inventory within the proposed safety zones has not been undertaken, and all potentially nonconforming uses are not known, three uses that would clearly be nonconforming in the IADZ zone are shown on Figures E-3 and E-4.

- Hospital (on California Drive) – nonconforming use
- Mills High School (part) – nonconforming use
- ESL Institute School, near Millbrae and Magnolia) – nonconforming use
- Place of worship (on Magnolia) – possible nonconforming use, depending on seating capacity

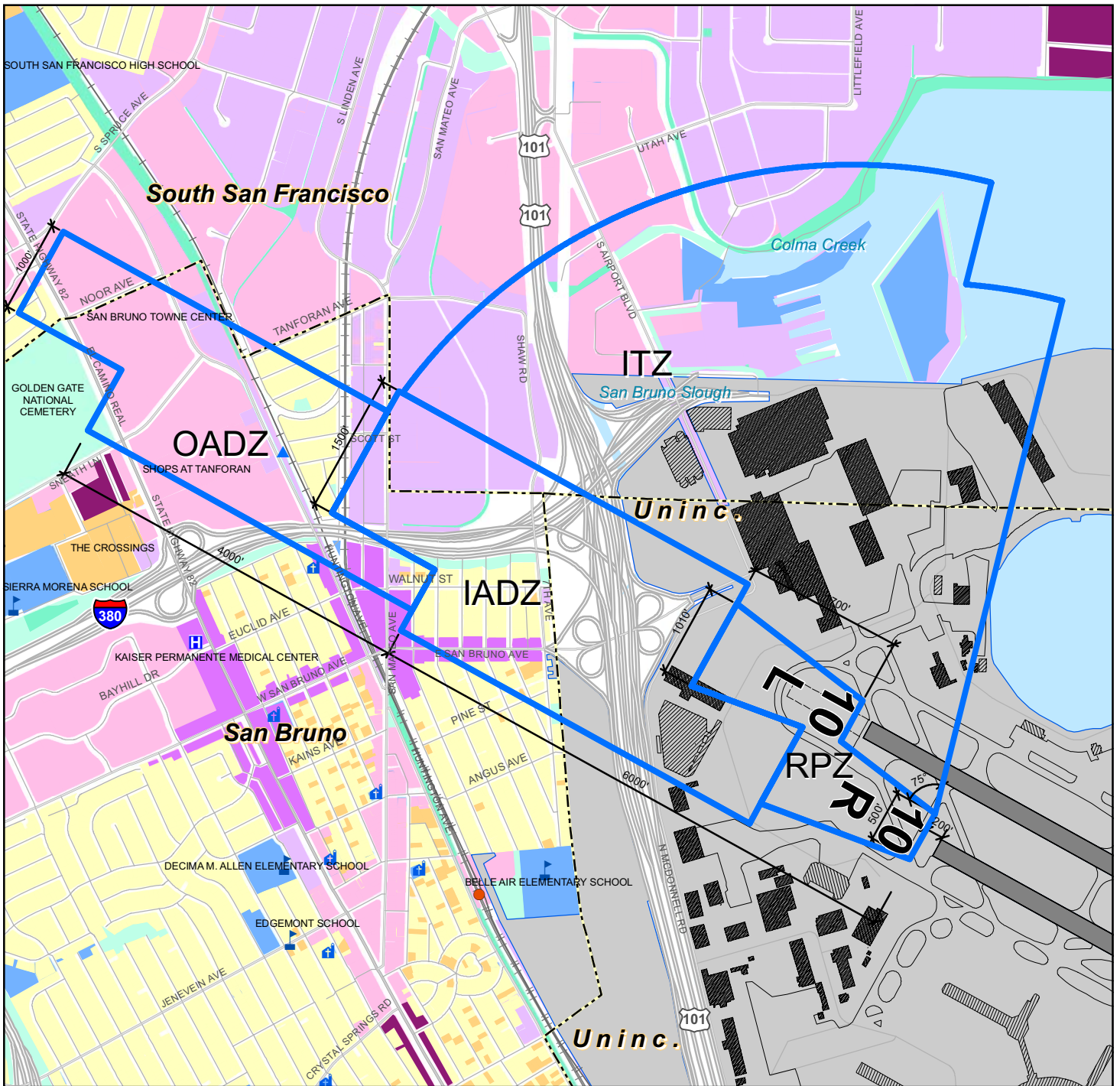
A partial land use survey of the area has revealed other uses in the IADZ that would not conform to the policies of Safety Alternative 3.

- Travelodge Hotel (on El Camino Real) – nonconforming use
- Mixed use development (on El Camino Real) – nonconforming residential use and building height (5 stories)

As discussed above in the section on Burlingame (Section E.10.1.2), a policy with respect to nonconforming uses should be considered for the CLUP. Alternatives are presented in that section.

### **E.10.3 Effect in San Bruno**

Figure E-3 shows existing land use and the safety zones off the west ends of the Runway 10-28 system. The northeast corner of San Bruno is inside the IADZ and OADZ. Within the IADZ is a mix of single-family and commercial land uses. Most of the OADZ is occupied by large-scale commercial development, including San Bruno Towne Center and the Shops at Tanforan. A BART station is near the center of the OADZ. Single-family residential is in the inner part of the OADZ. Only small parcels of undeveloped land remain within the safety zones.



**LEGEND**

**Safety Compatibility Zones**

- RPZ - Runway Protection Zone
- IADZ - Inner Approach/Departure Zone
- ITZ - Inner Turning Zone
- OADZ - Outer Approach/Departure Zone

- Airport Property
- ▲ BART Station
- CALTRAIN Station
- ▤ School
- ⛪ Place of Worship
- ⚪ Hospital

- Municipal Boundary
- Railroad
- Freeway
- Major Road
- Road

**Planned Land Use Per General Plans**

- Public
- Multi-Family Residential
- Single Family Residential
- Mixed Use
- Transit Oriented Development
- Retail
- Industrial, Transportation, and Utilities
- Local Park, Golf Course, Cemetery
- Regional Park or Recreation Area
- Open Space

NORTH



0 0.125 0.25 0.5 Miles

Figure E-5  
**SAFETY COMPATIBILITY ZONES  
 IN THE CITIES OF SOUTH SAN FRANCISCO  
 AND SAN BRUNO**  
 Comprehensive Airport Land Use Plan  
 For The Environs of San Francisco International Airport  
**C/CAG**  
 City/County Association of Governments  
 of San Mateo County, California

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### E.10.3.1 Relationship of Safety Standards to Local Plans

Figure E-5 presents the safety zones in relation to future land use, based on applicable general and specific plans. The updated San Bruno General Plan calls for the densification of development in the regional commercial zoning district at San Bruno Towne Center and Tanforan, near the BART station in the proposed OADZ zone. This includes the redevelopment of surface parking lots in the area. Among the uses encouraged are some that would be inconsistent with the suggested standards in Table E-6, including theaters, hotels, and educational services.

In the commercial areas along San Mateo Avenue within the OADZ and IADZ, transit-oriented development is encouraged. This includes a variety of uses that would conflict with the suggested standards in Table E-6, including hotels and motels, educational services, and new residential at densities up to 50 units per acre.

All existing residential neighborhoods in the safety zones are designated “conservation areas.” Policies are intended to preserve the housing stock and character of these areas. One policy, allowing small-lot single-family development in existing neighborhoods, could be inconsistent with the suggested policies in Table E-6 if the infill development was permitted at higher densities than the balance of the neighborhood.

#### **E.10.3.2 Potential Nonconforming Uses**

A comprehensive land use inventory within the proposed safety zones has not been undertaken, so complete information about the number and extent of nonconforming uses is unknown. The following uses, which would be nonconforming with the policies of Safety Alternative 3, are known to be in the proposed IADZ:

- Hotels on San Bruno Avenue (Comfort Inn Suites and Regency Inn) – nonconforming uses

Nonconforming use policies should be included in the CLUP as discussed above for Burlingame.

### **E.10.4 Effect in South San Francisco**

A small part of South San Francisco is inside the IADZ and a larger portion within the ITZ, as shown in Figure E-5. The affected parts of the city are almost fully developed for industrial or commercial uses, but redevelopment of obsolete industrial areas has been a major activity in recent years. .

#### **E.10.4.1 Relationship of Safety Standards to Local Plans**

The part of the ITZ east of US 101 is subject to the *East of 101 Area Plan*, adopted in 1994. The plan was created to guide the redevelopment of this traditional industrial

area that had become underused with the transformation of the national and Bay Area economies.

East of US 101, the western half of the area in the ITZ is designated for “planned commercial use,” including retail, offices, and business and professional services. This designation also includes hotels and motels and day care centers, uses that would be inconsistent with the standards in Table E-6.

The eastern half of the area in the proposed ITZ is designated for light industrial use, including light manufacturing, distribution, warehousing, wholesale, office, and research and development uses. Incidental retail intended to serve the surrounding businesses and employees would also be permitted. Big box retail would also be permitted.

Maximum building heights throughout the area covered by the plan are based on FAR Part 77 airspace surfaces. This would allow buildings taller than the 3-story limit suggested in Table E-6.

The plan notes that a number of above-ground fuel storage tanks are in the area. Under the plan, these are all nonconforming uses that cannot be replaced after they have been removed.

The area west of US 101 within the ITZ and IADZ zones is in the Lindenville planning subarea. The South San Francisco General Plan designates this area for “mixed industrial” use, subject to a loft overlay district which would permit residential use of upper floors. The loft overlay district is intended to permit development of a live/work environment in the area. Based on the potential land use standards in Table E-6, residential uses would be incompatible in both the IADZ and ITZ zones.

#### ***E.10.4.2 Potential Nonconforming Uses***

A detailed land use inventory within the proposed safety zones has not been undertaken, so it is unknown whether nonconforming uses are present in the proposed safety zones. Nevertheless, nonconforming use policies should be included in the CLUP as discussed above for Burlingame.

#### **E.10.5 Effect in Unincorporated San Mateo County**

A small part of unincorporated San Mateo County lies outside the airport property within the IADZ and RPZ for Runway 10L, as shown in Figure E-5. According to the figure, most of the area, including all of the RPZ, is on airport property. A small area at the northwest quadrant of the U.S. 101 San Bruno Avenue exit in the IADZ is undeveloped. The suggested standards for the IADZ shown in Table E-6 would appear to have no adverse effects.

## **E.11 SUMMARY OF EFFECTS OF ALTERNATIVE SAFETY COMPATIBILITY POLICIES**

Tables E-8 and E-9 summarize the potential effects of Safety Policy Alternatives 2 and 3 on each municipality. Policy Alternative 2, which would involve only limited additional land use standards, would have only a minor effect on each municipality. Policy Alternative 3, which includes more restrictions on land use types and building heights, would have a greater effect in each municipality. The effects are most extensive in the mixed use and transit-oriented development areas where the cities are promoting increased development densities, in particular, high-density residential development.

## **E.12 SUMMARY OF SAFETY COMPATIBILITY ISSUES**

The safety compatibility planning issues in the study area include the following:

- The substantially urbanized area in the Airport vicinity limits the opportunity for future land use planning and development to address safety compatibility needs as it does noise compatibility needs.
- Most local codes and planning documents do not specifically address airport safety compatibility. Local planners could benefit from specific advice on safety compatibility, including criteria for lot coverage, building density, occupancy levels, and potentially hazardous land uses to inform their review of site plans and development proposals and to enable them to offer helpful advice to developers.
- As with noise compatibility, revamped infill development policies to address safety compatibility requirements for isolated parcels of vacant land in airport safety compatibility zones may be warranted. While recognizing the need for new development that is compatible with the surrounding area, they should also include guidance for limiting densities and building occupancy levels and avoiding the development of intrinsically hazardous uses (such as fuel or toxic materials storage) under takeoff and landing paths.
- State and local policy requirements for the provision of housing and moderate to high-density transit-oriented development (TOD) create conflict with the state requirements and local goals to reduce airport safety incompatibilities.



Table E-8  
 SUMMARY OF NONCONFORMING USES AND EFFECTS ON GENERAL PLANS –  
 SAFETY COMPATIBILITY POLICY ALTERNATIVE 2

Zone	Land Use Standards		Nonconforming Uses, Potential Incompatibility General Plans			
	Prohibit	Avoid	Burlingame	Millbrae	San Bruno	South San Francisco
<b>Zone 1: Runway Protection Zone (RPZ)</b>						
All new structures		Nonresidential uses except very low intensity uses on sides and outer end of area.	Not applicable	Nonconforming Uses - Dwellings.	None	None
Places of assembly				Plan - Residential and industrial use districts		
Fuel Storage						
Wildlife attractants						
<b>Zone 2: Inner Approach/Departure Zone (IADZ)</b>						
Children’s schools, day care centers, hospitals, nursing homes.		--	Nonconforming Uses - none known	Nonconforming Uses - 2 schools, convalescent hospital	Nonconforming Uses - none known	Nonconforming Uses - none known
Hazardous uses (e.g., aboveground bulk fuel storage)			Plan - Mixed use, commercial districts could allow day care centers, nursing homes, hospitals	Plan - Mixed use, commercial districts could allow day care centers, nursing homes, hospitals	Plan - TOD, commercial, industrial districts could allow day care centers, nursing homes, hospitals	Plan - TOD, commercial, industrial districts could allow day care centers, nursing homes, hospitals
Critical public utilities						
<b>Zone 3: Inner Turning Zone (ITZ)</b>						
Children’s schools, large day care centers, hospitals, nursing homes		Hazardous uses (e.g., aboveground bulk fuel storage)	Nonconforming Use - Mills Peninsula Hospital (part).	Nonconforming Uses - none known	Not applicable	Nonconforming Uses - none known
		Critical public utilities	Plan - Mixed use, commercial districts could allow day care centers, nursing homes, hospitals	Plan - none known		Plan - Commercial, industrial districts could allow day care centers, nursing homes, hospitals

Table E-8 (page 2 of 2)

SUMMARY OF NONCONFORMING USES AND EFFECTS ON GENERAL PLANS – SAFETY COMPATIBILITY POLICY ALTERNATIVE 2

Zone	Land Use Standards		Nonconforming Uses, Potential Incompatibility General Plans			
	Prohibit	Avoid	Burlingame	Millbrae	San Bruno	South San Francisco
<b>Zone 4: Outer Approach/Departure Zone (OADZ)</b>						
	Children’s schools, large day care centers, hospitals, nursing homes.	Hazardous uses (e.g., aboveground bulk fuel storage)  Critical public utilities	Not applicable	Not applicable	Nonconforming Uses – none known  Plan – TOD, commercial, industrial districts could allow day care centers, nursing homes, hospitals	Not applicable

Definitions:

*Avoid:* Use should not be permitted unless no feasible alternative is available

*Prohibit:* Use should not be permitted under any circumstances

*Children’s schools:* Through grade 12

*Large day care centers:* Commercial facilities defined in accordance with state law; family day care homes and noncommercial facilities ancillary to place of business are generally allowed

*Critical public utilities:* Facilities that, if disabled by an aircraft accident, could lead to public safety or health emergencies. Examples include electrical power generation plants, electrical substations, wastewater treatment plants, and public water treatment facilities.

*Hazardous uses:* Uses that would substantially aggravate the consequences of an aircraft accident. They include manufacturing or storage of large quantities of flammable, explosive, or poisonous materials.

*Aboveground bulk storage of fuel:* Tank size greater than 6,000 gallons (based on Uniform Fire Code criteria which are more stringent for larger tanks)

Source: Jacobs Consultancy Team, 2009.

Table E-9  
**SUMMARY OF NONCONFORMING USES AND EFFECTS ON GENERAL PLANS –  
 SAFETY COMPATIBILITY POLICY ALTERNATIVE 3**

Zone	Land Use Standards		Nonconforming Uses, Potential Incompatibility of General Plans			
	Prohibit	Avoid	Burlingame	Millbrae	San Bruno	South San Francisco
<b>Zone 1: Runway Protection Zone (RPZ)</b>	All new structures Places of assembly Fuel Storage Wildlife attractants	Nonresidential uses except very low intensity uses on sides and outer end of area.	Not applicable	Nonconforming Uses - Dwellings Plan - Residential and industrial use districts	None	None
<b>Zone 2: Inner Approach/Departure Zone (IADZ)</b>	Buildings with more than three aboveground habitable floors Children’s schools, day care centers, hospitals, nursing homes Stadiums, arenas Residential uses, except on existing lots of record and provided that dwelling unit density is no greater than average density within 1,000 feet of the lot Auditoriums, meeting halls, theaters Retail shopping centers, big box retail stores Hotels Hazardous uses Critical public utilities	--	Nonconforming Uses - none known Plan - Mixed use, commercial districts could allow day care centers, nursing homes, hospitals, residential, auditoriums, meeting halls, theaters, hotels	Nonconforming Uses - 2 schools, convalescent hospital Plan - Mixed use, commercial districts could allow day care centers, nursing homes, hospitals, residential, auditoriums, meeting halls, theaters, hotels. Building heights up to 75 (approximately 6 to 7 stories) are permitted.	Nonconforming Uses - none known Plan - TOD, industrial districts could allow day care centers, nursing homes, hospitals, residential, auditoriums, meeting halls, theaters, hotels	Nonconforming Uses - none known Plan - Industrial districts allow residential loft development, may allow day care centers. Buildings taller than 3 stories are allowed.

Table E-9 (page 2 of 4)

SUMMARY OF NONCONFORMING USES AND EFFECTS ON GENERAL PLANS –  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 3

Zone	Land Use Standards		Nonconforming Uses, Potential Incompatibility of General Plans			
	Prohibit	Avoid	Burlingame	Millbrae	San Bruno	South San Francisco
<b>Zone 3: Inner Turning Zone (ITZ)</b>						
Buildings with more than four aboveground habitable floors	Hotels		Nonconforming Use – Mills Peninsula Hospital (part).	Nonconforming Uses – none known	Not applicable	Nonconforming Uses – none known
Children’s schools, large day care centers, hospitals, nursing homes	Hazardous uses		Plan – Mixed use, commercial, industrial districts could allow day care centers, nursing homes, hospitals,	Plan – Commercial districts could allow day care centers, nursing homes, hospitals,		Plan – East of US 101, commercial districts allow day care centers, hotels.
Stadiums, arenas	Critical public utilities		residential, auditoriums, meeting halls, theaters, hotels. High density residential allowed in mixed use districts.	residential, auditoriums, meeting halls, theaters, hotels.		West of US 101, Industrial districts allow residential loft development, may allow day care centers. Buildings taller than 4 stories are allowed.
Residential uses, except on existing lots of record and provided that dwelling unit density is no greater than average density within 1,000 feet of the lot						
Auditoriums, meeting halls, and theaters seating more than 600 people						

Table E-9 (page 3 of 4)

SUMMARY OF NONCONFORMING USES AND EFFECTS ON GENERAL PLANS –  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 3

Zone	Land Use Standards		Nonconforming Uses, Potential Incompatibility of General Plans			
	Prohibit	Avoid	Burlingame	Millbrae	San Bruno	South San Francisco
<b>Zone 4: Outer Approach/Departure Zone (OADZ)</b>						
Buildings with more than three aboveground habitable floors	Hotels	Hazardous uses	Not applicable	Not applicable	Nonconforming Uses – none known	Not applicable
Children’s schools, large day care centers, hospitals, nursing homes	Critical public utilities				Plan – TOD, commercial, industrial districts could allow day care centers, nursing homes, hospitals residential, auditoriums, meeting halls, theaters, hotels. High density residential allowed in mixed use districts.	
Stadiums, arenas						
Residential uses, except on existing lots of record and provided that dwelling unit density is no greater than average density within 1,000 feet of the lot						
Auditoriums, meeting halls, and theaters seating more than 400 people						

Table E-9 (page 2 of 4)

SUMMARY OF NONCONFORMING USES AND EFFECTS ON GENERAL PLANS –  
SAFETY COMPATIBILITY POLICY ALTERNATIVE 3

Definitions:

*Avoid:* Use should not be permitted unless no feasible alternative is available. Where use is allowed, habitable structures should be provided with at least 50 percent more exits than required by applicable codes.

*Prohibit:* Use should not be permitted under any circumstances

*Children's schools:* Through grade 12

*Large day care centers:* Commercial facilities defined in accordance with state law; family day care homes and noncommercial facilities ancillary to place of business are generally allowed

*Critical public utilities:* Facilities that, if disabled by an aircraft accident, could lead to public safety or health emergencies. Examples include electrical power generation plants, electrical substations, wastewater treatment plants, and public water treatment facilities.

*Hazardous uses:* Uses that would substantially aggravate the consequences of an aircraft accident. They include manufacturing or storage of large quantities of flammable, explosive, or poisonous materials and aboveground bulk storage of fuel.

*Aboveground bulk storage of fuel:* Tank size greater than 6,000 gallons (based on Uniform Fire Code criteria which are more stringent for larger tanks)

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\* Examples include parking lots and outdoor equipment storage.

Source: Jacobs Consultancy Team, 2009.

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**Appendix F**  
Roles of Federal, State, and Local  
Government in Airspace Protection





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## Appendix F

### ROLES OF FEDERAL, STATE, AND LOCAL GOVERNMENT IN AIRSPACE PROTECTION

This appendix explains the roles and responsibilities of the Federal Aviation Administration (FAA) and the State of California Department of Transportation, Division of Aeronautics, in the protection of airport vicinity airspace and the authority of local governments in California to implement the findings of FAA aeronautical studies.

#### F.1 AIRPORT VICINITY AIRSPACE

The FAA has developed a system of standards and criteria for assessing the potential effect of tall structures and high terrain on safe air navigation. Among the criteria are those that portray critical airspace as three dimensional imaginary surfaces around airports. These include the criteria defined in Title 14, Code of Federal Regulations (14 CFR) Part 77, Subpart C, *Standards for Determining Obstructions to Air Navigation or Navigational Aids or Facilities*, and FAA Order 8260.3B, *U.S. Standard for Terminal Instrument Procedures (TERPS)*.

- 14 CFR Part 77 – Subpart C of 14 CFR Part 77 sets forth criteria for the definition of imaginary surfaces around civil and military airports. The surfaces developed from these criteria establish obstruction standards used by the FAA in its review of proposed tall structures. Subpart C also defines obstruction standards as heights above ground or above airport elevation.
- TERPS – These surfaces are developed from criteria and standards defined in FAA Order 8260.3B, *U.S. Standard for Terminal Instrument Procedures*. There are multiple types of TERPS surfaces, each one protecting a specific segment of a published instrument flight procedure. In addition to 14 CFR Part 77 obstruction standards, TERPS surfaces are taken into consideration in FAA aeronautical studies.

#### F.2 DEFINITIONS

Several terms that have specific meanings as used in Federal regulations and guidelines must be defined in order to understand airspace analysis. The following definitions are taken from Airport Cooperative Research Program (ACRP) Report 38, *Understanding Airspace, Objects, and Their Effects on Airports*.<sup>1</sup>

**Obstacle** -- An object that does or would penetrate an OCS [obstacle clearance surface], or other specific clearance requirements, for a specific flight procedure. A controlling obstacle is the limiting factor around which a flight procedure must be designed.

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<sup>1</sup> LeighFisher, et al. 2010. ACRP Report 38, *Understanding Airspace, Objects, and Their Effects on Airports*. Airport Cooperative Research Program, pp. 9-10.

**Obstruction** -- An object that is determined by the FAA to be properly marked, lighted, and identified on aeronautical publications so that it may be easily recognized by pilots navigating through the airspace. Obstructions are subject to detailed aeronautical study to assess hazard status. Properly identifying objects as obstructions allows pilots to pay special attention to maintaining a safe distance from them.

**Hazard** -- An obstruction or other adverse object that an FAA aeronautical study concludes would have a “substantial adverse effect” to a “significant volume of aeronautical operations.” Objects that are hazards to navigation have been so determined because they are not sufficiently clear from the normal pathways of aircraft, or because they result in certain other adverse effects, such as electromagnetic interference, control tower visibility hindrances, or pilot distraction.

**MSL** -- Abbreviation of Mean Sea Level or Above Mean Sea Level. These terms are used to indicate the absolute altitude or elevation of an aircraft or other object with respect to mean sea level. Aircraft altitudes and the vertical dimensions of airspace are reported in terms of MSL altitudes.

**AGL** -- Abbreviation of the term Above Ground Level. This term is used when the altitude or elevation of an object above the ground is the subject of interest.

### **F.3 FEDERAL AUTHORITY AND RESPONSIBILITIES**

Federal law requires anyone proposing to build or alter a structure that would exceed FAA Notification Criteria to formally notify the FAA of the proposal. The FAA is required to undertake an aeronautical study of the proposed structure to determine whether it would constitute an obstruction or a hazard to safe air navigation. The FAA’s obstruction evaluation/airport airspace analysis (OE/AAA) process is prescribed in 14 CFR Part 77, and is described in detail in FAA Order JO 7400.2H, *Procedures for Handling Airspace Matters*. At the conclusion of the OE/AAA process, the FAA issues a final determination.

The FAA has no direct power to restrict or limit the proposed construction, although it can indirectly influence local government decisions on the issuance of permits for structures that would be obstructions or hazards to air navigation. (This is discussed in greater detail in Section F.3.1.2, below.)

**Figure F-1** presents a flow chart illustrating the steps in the FAA’s review process for tall structures. The process is discussed in detail below.

#### **F.3.1 Federal Requirements for Reporting Proposals to Build Structures**

14 CFR Part 77, Subpart B, subsection 77.9, *Construction or Alteration Requiring Notice*, requires anyone proposing to build or alter a structure that would exceed any of the following height criteria to notify the FAA of the proposal.

- A height more than 200 feet above ground level (AGL) at its site.

- Within 20,000 feet of a runway more than 3,200 feet in length, a height exceeding a 100:1 slope (i.e., a surface rising 1 foot vertically for every 100 feet horizontally) from the nearest point of the nearest runway. (Steeper slopes apply near heliports and airports with no runways longer than 3,200 feet.)
- When requested by the FAA, any construction or alteration that would be in an instrument approach area and may exceed a 14 CFR Part 77 obstruction standard.
- Any construction or alteration on any public-use or military airport.

Proposed roadways, railroads, and waterways are evaluated by considering the maximum height of vehicles that will be travelling on them.

The project sponsor must file FAA Form 7460-1, Notice of Proposed Construction or Alteration, with the manager of the Air Traffic Division of the FAA Regional Office having jurisdiction over the area. The FAA then conducts an initial aeronautical study to determine whether the proposal would exceed obstruction standards of 14 CFR Part 77.17. An object constitutes an obstruction to air navigation if any of the following standards are exceeded:

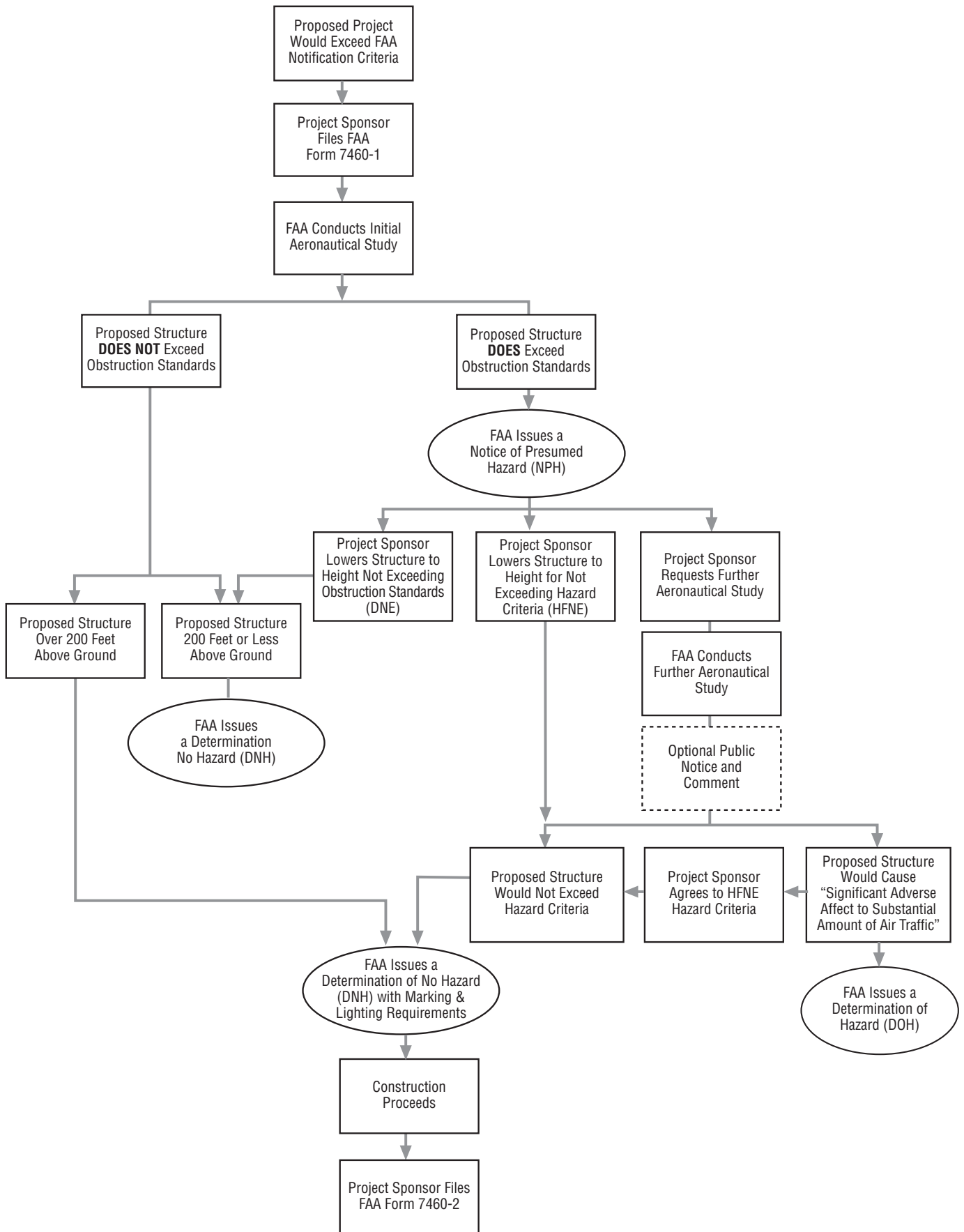
- A height of 499 feet AGL at the object site (§77.17(1)).
- A height of 200 feet AGL or above the airport elevation, whichever is greater, within 3 nautical miles (NM) of the Airport Reference Point (ARP), with its longest runway more than 3,200 feet in actual length, and that height increases at a rate of 100 feet per NM up to 499 feet (§77.17 (2)).
- A height that increases a minimum instrument flight altitude within a terminal area. This standard references instrument procedure criteria such as TERPS (§77.17(3)).
- A height that increases a minimum obstacle clearance altitude under en-route criteria (§77.17(4)).
- The surface of a take-off and landing area of an airport (§77.17(5)) or any imaginary surface established under §77.19 for civil airports, §77.21 for military airports, and §77.23 for heliports.

After conducting the initial aeronautical review, the FAA issues a Determination of No Hazard (DNH) or a Notice of Presumed Hazard (NPH).

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Figure F-1

### THE FAA'S OBSTRUCTION EVALUATION / AIRPORT AIRSPACE ANALYSIS (OE/AAA) PROCESS





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### **F.3.1.1 FAA Determination of No Hazard**

The FAA will issue a Determination of No Hazard to Air Navigation (DNH) when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation. The DNH will include appropriate marking and lighting recommendations, as appropriate. If the proposed structure would not exceed any obstruction standard, the DNH will include a Does Not Exceed (DNE) status determination, with no expiration date and no marking and lighting requirements.

A DNH also may be issued even if the proposed structure would exceed an obstruction standard as long as it would not have a substantial adverse impact on air navigation. In such cases, the DNH would be issued only after a preliminary FAA Notice of Presumed Hazard (NPH) and a subsequent, more detailed FAA study or the project sponsor's agreement to resolve the concerns raised in the NPH. In those cases, the DNH may include conditions, including:

- Limitations necessary to minimize potential problems, such as the use of temporary construction equipment.
- Supplemental notice requirements.
- Obstruction marking and lighting recommendations, as appropriate.

Unless it is extended, revised, or terminated, each Determination of No Hazard (without DNE status) expires 18 months after the effective date of the determination, or on the date the proposed construction or alteration is abandoned, whichever is earlier.<sup>2</sup>

### **F.3.1.2 FAA Notice of Presumed Hazard**

If, after an initial aeronautical study, the FAA determines that a proposed project exceeds obstruction standards, it issues a Notice of Presumed Hazard (NPH). The NPH will either recommend lowering the proposed structure to the height not exceeding obstruction standards (DNE height) or cite a maximum "height for not exceeding" (HFNE), occasionally called "no effects height" (NEH), with respect to hazard criteria. The HFNE height may be noted if the proposal is near existing structures or other proposed structures that the FAA has already studied and for which it has already calculated hazard limitations. The FAA may also compute the HFNE if it anticipates that the project sponsor would not accept the DNE height and will want to obtain a DNH at the maximum feasible height.

The NPH is temporary, expiring after 60 days. If no resolution is attempted within 60 days, the FAA terminates the case. The project sponsor has several resolution options:

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<sup>2</sup> 14 CFR Part 77, Subpart D, *Aeronautical Studies and Determinations*, Section 77.33, "Effective Period of Determinations."

- (1) The sponsor may agree to lower the proposed height of the structure so that it would not exceed obstruction standards (the DNE elevation). This routinely results in the FAA issuing a DNH.
- (2) The sponsor may agree to lower the height of the structure to the HFNE height, if one was indicated on the NPH. This routinely results in the FAA issuing of a DNH, with marking and lighting requirements.
- (3) The sponsor may request the FAA to perform further aeronautical study at the originally requested height.
- (4) The sponsor may request the FAA to perform further aeronautical study for a structure at a height lower than the original proposal but not as low as the alternative height noted on the NPH letter.

Upon receiving a request for further aeronautical study, the FAA initiates a complex process which involves analyzing flight procedures, NAVAIDS, radar, and other factors in the airspace in the vicinity of the proposed structure. The objective of this detailed aeronautical study is to determine whether the proposed structure would have a significant adverse effect to a substantial amount of air traffic, and thereby constitute a hazard to air navigation. The most frequently applied criteria for hazard status determinations are TERPS criteria, but other criteria, such as visual flight rules (VFR) clearances, navigational aid (NAVAID) considerations, and air traffic procedures can be cited. Per 14 CFR Part 77, Subpart D, these factors can include:

- (1) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules;
- (2) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules;
- (3) The impact on existing and planned public use airports;
- (4) Airport traffic capacity of existing public-use airports and public use airport development plans received before the issuance of the final determination;
- (5) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures;
- (6) The potential effect on air traffic control (ATC) radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, and other surveillance systems;

- (7) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.<sup>3</sup>

During the further aeronautical study phase, the FAA, at its discretion, may circulate the proposal under the Public Notice process. A Public Notice contains a basic description of the proposal and the amount by which it exceeds obstruction standards. It may also describe effects to published instrument procedures if the FAA has calculated those in the early review. The Public Notice is posted on the publicly available portion of the FAA's OE/AAA website (<http://oeaaa.faa.gov>), and can also be sent to local airport operators, airlines, pilots' associations, and other interested stakeholders.

FAA OE/AAA website subscribers who have requested to be notified of proposals, determinations, and public notices in proximity to specified airports will be automatically notified. Any interested stakeholder may submit comments by the specified due date, which is generally 35 to 40 days after the issuance of Public Notice. Public Notice is the formal, and sometimes the only, opportunity for third-party stakeholders (those other than the FAA and the project sponsor) to provide input in the OE/AAA process. The FAA must consider all comments of a significant aeronautical nature.

The FAA concludes the detailed aeronautical study process with a determination as to whether the proposed construction would constitute a hazard to air navigation, sending a copy of the determination to all interested parties. The FAA's determination becomes effective 40 days after issuance, unless an interested party files a petition for "discretionary review," which is an appeal to FAA Headquarters to overturn the determination. In that case, the determination becomes effective after the discretionary review process is concluded.

The FAA will issue a Determination of Hazard to Air Navigation (DOH) when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact, and where negotiations with the project sponsor have failed to result in acceptance of a height not exceeding obstruction standards or hazard standards. FAA DOHs have no expiration date.

The FAA has no direct jurisdictional authority through which it can require the project sponsor to alter the proposed structure to eliminate the hazard. That power rests with state and local land use regulatory authorities. While the FAA has no direct land use regulatory authority, it can exert leverage on jurisdictions with land use regulatory authority that are also airport operators. The failure of an airport operator with land use regulatory authority to enforce an FAA Hazard

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<sup>3</sup> 14 CFR Part 77, Subpart D, *Aeronautical Studies and Determinations*, 77.29, "Evaluating Aeronautical Effect."

Determination could be interpreted as a violation of Grant Assurances 20 and 21, which bind the airport operator to protect the approaches to the airport and to promote airport land use compatibility.<sup>4</sup>

### **F.3.2 One-Engine Inoperative (OEI) Procedures**

The airworthiness standards in 14 CFR Part 25 require manufacturers of multi-engine transport category aircraft to design aircraft and develop operating procedures to achieve minimum safe climb performance with one engine inoperative as a condition of receiving an aircraft type certificate permitting operation of the aircraft in the United States (Sec. 25.121 and 25.107). Federal law also requires air carrier and commercial aircraft operators holding operating certificates issued under 14 CFR Part 119 to maintain operations specifications that require, among other things, a description of the limitations at all airports, including obstructions, at which they operate (Sec. 119.49). Operators are required to develop aircraft operating procedures for each airport to ensure safe climb performance on departure, clearing all obstacles, in case one engine becomes inoperative (14 CFR Part 121, Sections 181, 183, 191, 193, and 201). This requires carriers to maintain current obstruction surveys of the airports they serve. Among the operating criteria they must set are maximum payload limits permitting aircraft to safely climb above obstructions in case of loss of power to one engine. The airspace protection zones for the flight paths and climb gradients, as designed in the OEI procedures, can be mapped as three-dimensional surfaces, similar in appearance to TERPS or Part 77 surfaces. These OEI procedures are proprietary to each operator and vary by aircraft type.

While it is possible to depict aeronautical surfaces defined by each of these OEI procedures, the FAA does not routinely analyze OEI surfaces in the OE/AAA process, for the following reasons:

- (1) Complexity – Each airline’s OEI procedures for a given runway may be different. Therefore, there are often multiple overlapping procedures off any given runway.
- (2) Adjustability – OEI procedures can be adjusted. Airlines can alter OEI procedures to avoid newly created obstacles, either by requiring lighter takeoff weights or developing turns to avoid the obstacle. Takeoff weight can be lessened by removing fuel, which can limit range, or by removing payload (passengers, baggage, cargo), which reduces revenue. These economic impacts on carriers can be substantial, potentially endangering their ability to continue offering a flight or serving a distant market. Traditionally, FAA has considered the economic effect of a proposed structure on an airline as an insufficient basis, in itself, for a hazard determination.

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<sup>4</sup> Assurances, Airport Sponsors. Downloaded from FAA website, March 2011, [www.faa.gov/airports/aip/grant\\_assurances/](http://www.faa.gov/airports/aip/grant_assurances/) (accessed January 26, 2012).

Airlines often submit comments during the FAA's further aeronautical study process in response to the Public Notice of the proposal. When they raise concerns about an adverse impact on their OEI procedures, the FAA's response is frequently that "economic impact to an airline is not, in itself, basis for a hazard determination." However, if multiple airlines submit comments and can demonstrate that the loss of clear airspace needed for OEI procedures would lead to an inability to use a runway or the loss of capability to fly critical routes, the FAA can interpret this as a "significant adverse effect to a substantial amount of air traffic." This would be grounds for a hazard determination.

In the recent past, several high-profile structures that would not exceed obstruction standards or impact TERPS procedures but that would impact OEI procedures have been proposed and built near major U.S. airports. The controversies arising from these proposals, and the pressure from airlines and airports to clarify OEI protection, has led the FAA to initiate the "OEI Pilot Program" at five airports where OEI protection has been an issue that has been addressed in some manner by the airport and its neighbors. These include Boston-Logan, Phoenix-Sky Harbor, Las Vegas-McCarran, Washington-Reagan National, and Miami international airports. Most of these airports have undertaken some type of OEI surface mapping effort similar to SFO, where airlines were polled to determine their OEI procedures, and aggregate OEI protection areas were developed that accommodate some or all of the individual airlines' procedures.

The consideration of OEI procedures in the definition of airport vicinity airspace protection surfaces can be an important enhancement to a locally administered comprehensive airport compatibility plan. Federal OEI requirements have two important implications for airport compatibility and airport protection.

1. Because the modification of OEI procedures at any given airport is not monitored on a comprehensive, real-time basis, the potential exists for some delay on the part of some carriers in modifying their procedures to address new obstructions.
2. The modification of OEI procedures to address new obstructions can require carriers to reduce allowable payloads for certain types of aircraft. This can ultimately result in payload penalties that are too severe to allow service to distant destinations, compromising the utility of the airport and wasting the public investment in transportation infrastructure.

#### **F.4 CALIFORNIA STATE REQUIREMENTS**

The State Aeronautics Act recognizes the 14 CFR Part 77 obstruction and hazard standards and provides the basis for local jurisdictions and the State Department of Transportation to enforce their protection. The law prohibits the construction of any structure more than 500 feet above the ground without the issuance of a permit by the Department (Article 2.7, "Regulation of Obstructions," Section 21656). The

Department is authorized to deny the permit if the proposed structure would obstruct the airspace so as to create an unsafe condition for aircraft in flight (i.e., would exceed hazard standards).<sup>5</sup>

A permit is not required if the FAA has determined that the proposed structure does not constitute a hazard to air navigation or an unsafe condition for aircraft in flight. Thus, permits are required only for structures that have been found to be a hazard to air navigation. Therefore, structures that exceed obstruction standards, and have not been issued a FAA DNH, and have not been issued a Caltrans permit, are in violation of PUC Section 21659. According to the Department's Division of Aeronautics, the Department has never issued a permit under this provision of state law.<sup>6</sup>

## **F.5 LOCAL GOVERNMENT AUTHORITY IN CALIFORNIA**

Local governments in California have the authority to regulate airspace and enforce FAA hazard determinations through their land use regulatory powers. This authority was the basis for an order issued in 2009 by a Superior Court in California ruling on a case in San Diego. A brief explanation of the case is helpful in understanding the scope of local authority.

In February and March of 2006, Sunroad Enterprises applied for and received excavation, foundation, and framing permits from the City of San Diego to build a 180-foot tall office building near Montgomery Field, an airport operated by the City of San Diego. In April 2006, after receiving the permits and beginning construction, the developer filed a Form 7460-1 notifying the FAA of the project. Before the end of the month, the FAA issued a "Notice of Presumed Hazard," informing the developer and the City that the structure should be built no taller than 160 feet so as not to exceed obstruction standards, and requesting the developer to cease work on the project. The City advised the builder to amend its plans to conform to the FAA hazard determination, and the State Department of Transportation supported the City, insisting that, as a matter of state law, the developer was required to get a permit from the State since the building was found by the FAA to be a hazard. The builder decided to proceed with the original plan, claiming that it had a vested right by virtue of the City's issuance of the original permits.

Two years later, and after the building was finished, the developer agreed to remove the top 20 feet of the structure. The developer then sued the City for damages, claiming that the City was liable for the demolition costs and lost income caused by the delay in opening the building. In an order issued on May 14, 2009, the Superior Court dismissed the case.<sup>7</sup> The Court said that while the City did indeed make an error, the builder had an obligation under Federal law to file with the FAA a Notice

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<sup>5</sup> Public Utilities Code, Section 21659, "Hazards Near Airports Prohibited."

<sup>6</sup> Terry Barrie, Chief, Office of Aviation Planning, California Division of Aeronautics. Interviewed by Mark R. Johnson, Ricondo & Associates, Inc., May 2009.

<sup>7</sup> City of San Diego v. Sunroad Centrum, L.P., et al., Case No. GIC 877054, Order Granting City's Motion for Summary Judgment on Sunroad's First Amended Cross Complaint.

of Proposed Construction or Alteration (Form 7460-1) and to comply with the findings of the FAA's ensuing aeronautical study. The City was acting within its authority to demand the builder reduce the height of the structure to comply with the FAA's airspace hazard determination.



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**Appendix G**  
Implementation Documents



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## **Appendix G**

### **IMPLEMENTATION DOCUMENTS**

Three implementation documents are provided in this appendix: draft project review checklists; the real estate disclosure language relating to the proximity of an airport mandated by California law; and the aviation easement proposed for use in accordance with Policy NP-3 of this CLUP.

## DRAFT PROJECT REVIEW CHECKLIST

### LOCAL GOVERNMENT CHECKLIST 1 -- For use *before* local plans and land use ordinances have been made consistent with the Comprehensive Airport Land Use Compatibility Plan (CLUP) for the Environs of San Francisco International Airport.

- \_\_\_ Proposed action is a “land use policy action” in Airport Influence Area B, Project Referral Area (see Section 3.1 in Chapter 3 of CLUP and Exhibit IV-2 in Chapter 4).
  - \_\_\_ Refer proposed project to C/CAG staff
- \_\_\_ Proposed project requires only ministerial action and is in Airport Influence Area B, Project Referral Area
  - \_\_\_ Refer proposed project to C/CAG staff
- \_\_\_ Proposed project has a height of over 200 feet above the site elevation.
  - \_\_\_ Applicant must file FAA Form 7460-1 with the Federal Aviation Administration (FAA).
- \_\_\_ Proposed project is within 20,000 feet of nearest runway at SFO, has height less than 200 feet above site elevation, but exceeds the filing requirement heights depicted on Exhibits IV-10, IV-11, and IV-12 in CLUP.
  - \_\_\_ Applicant should verify that the proposed project exceeds the Form 7460-1 filing requirement heights by using the FAA’s on-line Notice Criteria Tool:  
<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>
  - \_\_\_ If proposed structure exceeds filing height, advise applicant to file FAA Form 7460-1 with the FAA. Check FAA website for up-to-date filing information:  
<https://oeaaa.faa.gov/oeaaa/external/content/oeaaaOffices.jsp>
- \_\_\_ Proposed project would exceed, or may come close to exceeding, the heights of the SFO critical aeronautical surfaces as depicted in Chapter 4.
  - \_\_\_ Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211.
  - \_\_\_ Use SFO’s online tool for aeronautical surface height evaluation to assess potential conflicts between the proposed structure and the critical aeronautical surfaces. Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211 for training and access to the tool.
  - \_\_\_ Applicant must file FAA Form 7460-1 with the FAA.

**LOCAL GOVERNMENT CHECKLIST 2 -- For use *after* local plans and land use ordinances have been made consistent with the airport/land use compatibility criteria and guidelines contained in the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.**

- \_\_\_ Proposed action is a “land use policy action” in Airport Influence Area B, Project Referral Area (see Section 3.1 in Chapter 3 of CLUP and Exhibit IV-2 in Chapter 4).
  - \_\_\_ Refer proposed project to C/CAG staff
- \_\_\_ Proposed project requires only ministerial action and is in Airport Influence Area B, Project Referral Area
  - \_\_\_ Local government processes proposed project
- \_\_\_ Check location of proposed project with respect to the most recent Quarterly Noise Contour Map for SFO. Contact the SFO Aircraft Noise Abatement Office at (650) 821-5100 for the most recent Quarterly Noise Contour Map.
  - \_\_\_ If proposed project is within the CNEL 65 dB contour, an aviation easement must be granted to the City and County of San Francisco.
- \_\_\_ Proposed project is within Noise Compatibility Zones depicted on Exhibits IV-5 and IV-6 in CLUP.
  - \_\_\_ Compare proposed project with noise/land use compatibility criteria in Table IV-1 of CLUP.
  - \_\_\_ If compatible, no more action under noise compatibility criteria is required
  - \_\_\_ If not compatible and no other conditions apply per Table IV-1, use is not permissible.
  - \_\_\_ If use is either (1) conditionally compatible or (2) not compatible but permissible on an existing lot of record, check applicable conditions per policies NP-2, NP-3, and Table IV-1.
- \_\_\_ Proposed project is within Safety Compatibility Zones depicted on Exhibits IV-7, IV-8, and IV-9 in CLUP.
  - \_\_\_ Compare proposed project with safety compatibility criteria in Table IV-2 of CLUP.
    - \_\_\_ If prohibited, use is not permissible.
    - \_\_\_ If use is to be “avoided,” applicant shall be required to provide evidence of whether alternative locations for use are feasible.
    - \_\_\_ If a use that is to be “avoided” is permitted, 50 percent more exits than required by applicable codes must be required. (If the calculation of additional exits results in a fraction, round up the value to the nearest whole number.)



- \_\_\_ Proposed project has a height of over 200 feet above the site elevation.
  - \_\_\_ Advise applicant to file FAA Form 7460-1 with FAA, San Francisco Airports District Office.
- \_\_\_ Proposed project is within 20,000 feet of nearest runway at SFO, has height less than 200 feet above site elevation, but exceeds the filing requirement heights depicted in Exhibits IV-10, IV-11, and IV-12 in CLUP.
  - \_\_\_ Advise applicant to verify that the proposed project exceeds the Form 7460-1 filing requirement heights by using the FAA's on-line Notice Criteria Tool:  
  
<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>
  - \_\_\_ If proposed structure exceeds filing height, advise applicant to file FAA Form 7460-1 with the FAA. Check FAA website for up-to-date filing information:  
  
<https://oeaaa.faa.gov/oeaaa/external/content/oeaaaOffices.jsp>
- \_\_\_ Proposed project would exceed, or may come close to exceeding, the heights of the SFO critical aeronautical surfaces as depicted in Exhibits IV-17 and IV-18 in Chapter IV.
  - \_\_\_ Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211.
  - \_\_\_ Use SFO's online tool for aeronautical surface height evaluation to assess potential conflicts between the proposed structure and the critical aeronautical surfaces. Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211 for training and access to the tool.
  - \_\_\_ If proposed project is confirmed to exceed the heights of the critical aeronautical surfaces the project is not permissible and must be modified so as not to exceed the heights of the critical aeronautical surfaces.
- \_\_\_ Receive from applicant the FAA's completed obstruction evaluation report, prepared pursuant to review of Form 7460-1 filing by applicant.
  - \_\_\_ Condition project approval on applicant's compliance with recommendations in FAA's obstruction evaluation report.

## **C/CAG CHECKLIST for Airport Land Use Compatibility Review of Proposed Local Agency Land Use Policy Actions**

Proposed project referred by local government is within Airport Influence Area B, Project Referral Area

### **Avigation Easement**

- \_\_\_ Check location of proposed project with respect to the CNEL 65 dB aircraft noise contour in the most recent Quarterly Noise Report published by SFO. Contact the SFO Aircraft Noise Abatement Office at (650) 821-5100 for the most recent Quarterly Noise Contour Map.
- \_\_\_ If proposed project is within the CNEL 65 dB contour as referenced above, an avigation easement must be granted to the City and County of San Francisco.

### **Noise Compatibility**

- \_\_\_ Proposed project is within Noise Compatibility Zones depicted on Exhibits IV-5 and IV-6 in CLUP.
  - \_\_\_ Compare proposed project with noise/land use compatibility criteria in Table IV-1 of CLUP.
    - \_\_\_ If compatible, no more action under noise compatibility criteria is required
    - \_\_\_ If not compatible and no other conditions apply per Table IV-1, use is not permissible.
- \_\_\_ If use is either (1) conditionally compatible or (2) not compatible but permissible on an existing lot of record, check applicable conditions per policies NP-2, NP-3, and Table IV-1.

### **Safety Compatibility**

- \_\_\_ Proposed project is within Safety Compatibility Zones depicted on Exhibits IV-7, IV-8, and IV-9 in CLUP.
  - \_\_\_ Compare proposed project with the safety compatibility criteria in Table IV-2 of CLUP.
    - \_\_\_ If prohibited, use is not permissible.
    - \_\_\_ If use is to be "avoided," applicant shall be required to provide evidence of whether alternative locations for use are feasible.
    - \_\_\_ If a use that is to be "avoided" is permitted, 50 percent more exits than required by applicable codes must be required. (If the calculation of additional exits results in a fraction, round up the value to the nearest whole number.)

## Airspace Protection

- \_\_\_ Proposed project has a height of over 200 feet above the site elevation.
  - \_\_\_ Advise applicant to file FAA Form 7460-1 with the FAA, San Francisco Airports District Office.
- \_\_\_ Proposed project is within 20,000 feet of nearest runway at SFO, has height less than 200 feet above site elevation, but exceeds the filing requirement heights depicted in Exhibits IV-10, IV-11, or IV-12 in CLUP.
  - \_\_\_ Advise applicant to verify that the proposed project exceeds the Form 7460-1 filing requirement heights by using the FAA's on-line Notice Criteria Tool:  
  
<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>
  - \_\_\_ If proposed structure exceeds filing height, advise applicant to file FAA Form 7460-1 with the FAA. Check the FAA website for up-to-date filing information:  
  
<https://oeaaa.faa.gov/oeaaa/external/content/oeaaaOffices.jsp>
- \_\_\_ Proposed project would exceed, or may come close to exceeding, the heights of the SFO critical aeronautical surfaces as depicted in Chapter IV.
  - \_\_\_ Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211.
  - \_\_\_ Use SFO's online tool for aeronautical surface height evaluation to assess potential conflicts between the proposed structure and the critical aeronautical surfaces. Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211 for training and access to the tool.
  - \_\_\_ If proposed project is confirmed to exceed the heights of the critical aeronautical surfaces, the project is not permissible and must be modified so as not to exceed the heights of the critical aeronautical surfaces.
- \_\_\_ Receive from applicant the FAA's completed obstruction evaluation report, prepared pursuant to review of Form 7460-1 filing by applicant.
  - \_\_\_ Condition project approval on applicant's compliance with recommendations in FAA's obstruction evaluation report.

## CALIFORNIA REAL ESTATE DISCLOSURE NOTICE

### Re: Real Property for Sale within an Airport Influence Area (AIA) Boundary

Section 11010 of the California Business and Professions Code requires people offering subdivided property for sale to disclose the presence of all existing and planned airports within two miles of the property.<sup>1</sup> The law requires that, if the property is within an “airport influence area” designated by the airport land use commission, the following statement must be included in the notice of intention to offer the property for sale:

#### NOTICE OF AIRPORT IN VICINITY

This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.

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<sup>1</sup> California Business and Professions Code, Section 11010(b)(13).

## GRANT OF AVIGATION EASEMENT

RECORDING REQUESTED BY:

WHEN RECORDED MAIL TO:

City and County of San Francisco  
Real Estate Department  
25 Van Ness Avenue, Suite 400  
San Francisco, CA 94102

## GRANT OF AVIGATION EASEMENT

(Civil Code Section 1468, Public Utilities Code Section 21652)

This Grant of Avigation Easement is executed and delivered as of this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_, by \_\_\_\_\_ (GRANTOR)

and the City and County of San Francisco, a political subdivision of the State of California (CITY or GRANTEE), with reference to the following facts:

### Recitals

A. GRANTOR is the owner of that certain property ("Real Property"), legally described in Exhibit "A," attached hereto and incorporated herein by reference, the street address of which is \_\_\_\_\_, California.

B. CITY is the owner and operator of the San Francisco International Airport ("SFO").

C. Pursuant to the relevant content in the Comprehensive Airport Land Use Compatibility Plan (CLUP) for the environs of SFO, as amended, as a condition of, and prior to, approval of a permit by the relevant land use authority (city or county) for the development or improvement of property within the 65 decibel (dB) Community Noise Equivalent Level (CNEL) boundary and higher as shown on the most recent quarterly noise contour map submitted to the State of California, Department of Transportation, Division of Aeronautics by SFO staff, in accordance with Section 5025 of Title 21 of the California Code of Regulations the grant by GRANTOR of a permanent non-exclusive easement, rights and servitudes (the "Avigation Easement") shall be required in favor of CITY. A copy of the most recent quarterly noise contour map referenced herein that illustrates the location of the GRANTOR's Real Property is attached hereto as Exhibit "B." The Avigation Easement shall be recorded in the chain of title in the County of San Mateo Assessor-Clerk-Recorder's Office prior to issuance of the permit.

D. All relevant CNEL noise contour maps and grid data needed to identify the aircraft noise levels for all properties located within the 65 dB CNEL aircraft noise contour and higher, to determine the application of this Avigation Easement as stated in Section 3.2 herein, are available from the [www.flysfo.com](http://www.flysfo.com) website or from the Noise Abatement Office staff at San Francisco International Airport.

### **Grant of Avigation Easement**

1. Grant. GRANTOR, individually and for the heirs, successors and assigns of GRANTOR, hereby grants, conveys and assigns to CITY and its successors, a perpetual and assignable Avigation Easement in and over the Real Property for the purposes described herein below.

1.1 Passage of Aircraft. The Avigation Easement shall include for the use and benefit of the public, the easement and continuing right to fly, or cause or permit the flight by any and all persons, of any aircraft, of any and all kinds now or hereafter known, in, through, across or about any portion of the airspace above and within the vicinity of the Real Property, with such rights of use and passage by aircraft without restriction as to frequency, type of aircraft and proximity to the surface of the Real Property, so long as the exercise of such rights is not in violation of then applicable federal laws governing flight operations.

1.2 Noise and Other Incidental Effects. The Avigation Easement shall include the right to cause within, and to enter or penetrate into or transmit through, any improved or unimproved portion of Real Property, and within all airspace above Real Property, such noise, sounds, vibrations, air currents, illumination, electronic interference and aircraft engine exhaust and emissions, dust, discomfort or other environmental effects incident to aircraft operations, and any and all resulting interference with use and enjoyment, and any consequent reduction in market value, all due to the operation of aircraft to and from SFO upon GRANTOR's Real Property.

1.3 Interference with Air Navigation/Communications. In furtherance of this Avigation Easement, GRANTOR covenants that it will not construct, install, permit or allow any building, structure, improvement, tree, or other object on the Real Property to constitute an obstruction to air navigation, or to use or permit the use of Real Property in such a manner as to create electrical or electronic interference with aircraft communications systems, aircraft navigation equipment, or with Federal Aviation Administration, airline, or airport personnel communication with any aircraft.

2. Baseline. The 65 dB Community Noise Equivalent Level (CNEL) noise contour shown on the most recent quarterly noise map filed by SFO staff with the State of California, Department of Transportation, Division of Aeronautics, in accordance with Section 5025 of Title 21 of the California

Code of Regulations, shall be the basis for determining the baseline level for the GRANTOR's Real Property.

**3. Waiver of Legal Actions and Exceptions.** GRANTOR, together with its successors in interest and assigns, hereby waives its right to legal action against CITY, its successors or assigns, for monetary damages or other redress due to impacts, as described in Section 1.2 of the granted rights of easement, associated with aircraft operations in the air or on the ground at SFO, including future increases in the volume or changes in location of said operations. However, this waiver shall not apply under the circumstances specified below.

**3.1 For Property Located Outside the 65 dB CNEL Boundary (for non-CLUP easements).** The waiver shall not be in effect for property located outside the 65 dB CNEL noise contour boundary as shown on the most recent quarterly noise map, if three (3) of any four (4) quarterly noise report maps, as reported to the State of California, for any calendar year show that the noise level imposed on GRANTOR's Real Property exceeds 68 dB CNEL or higher, and the waiver shall remain not in effect until two (2) consecutive subsequent quarterly noise maps show the level of noise to be at or lower than 68 dB CNEL.

**3.2 For Property Located Within the 65 dB CNEL Boundary and Higher.** The waiver shall not be in effect for property located within the 65 dB CNEL noise contour boundary and higher, as shown on the most recent quarterly noise map, if three (3) of any four (4) quarterly noise report maps, as reported to the State of California, for any calendar year show that the noise level imposed on GRANTOR's Real Property exceeds the baseline CNEL level as stated in Section 2 by more than 3 dB CNEL (68 dB CNEL and higher), and the waiver shall remain not in effect until two (2) consecutive subsequent quarterly noise maps show the level of noise to have been no more than 3 dB CNEL greater than the baseline.

**3.3. Exceptions.** Any change in the noise level, as reported on a quarterly noise map for SFO filed with the State of California, Department of Transportation, Division of Aeronautics, in accordance with Section 5025 of Title 21 of the California Code of Regulations, which reflects a change in noise level which results from the temporary increased use of certain runways, due to construction or repair of other runways, or due to any other cause or causes beyond the control of CITY (e.g., weather or wind conditions, but not flight pattern shifts authorized by the Federal Aviation Administration) shall not be used to compute the noise level imposed on GRANTOR's Real Property for the purposes of this Section 3.

**4. Negligent or Unlawful Acts Excepted.** This grant of Avigation Easement shall not operate to deprive the GRANTOR, its successors or assigns, of any rights which it may from time to time have against any air carrier or private operator for negligent and/or unlawful operation of aircraft to, from,

or in or about SFO, nor does this Avigation Easement include or authorize aircraft landing, explosion, crash, falling objects or other occurrences causing direct physical injury to persons or direct physical damage to property.

5. Easement Benefit. The Avigation Easement shall be deemed both appurtenant to and for the direct benefit of that real property which constitutes the San Francisco International Airport, and shall be deemed in gross, being conveyed to CITY for the benefit of the CITY and any and all members of the general public who may use said easement, taking off from, landing upon, or operating such aircraft in or about the said SFO, or otherwise flying through the airspace above or in the vicinity of Real Property.

6. Covenants Run with the Land. These covenants and agreements run with the land (Real Property) in perpetuity and any grantee, heir, agent, successor, assign of the GRANTOR who acquires any estate or interest in or right to use Real Property shall be bound by this Avigation Easement for the benefit of CITY, and its agents, successors and assigns.

7. Termination. This Avigation Easement shall terminate and have no further force and effect if the project for which the easement was granted is not built and the permit and any permit extensions authorizing the construction of the use have expired or been revoked. Upon notification by the city or county granting the permit, CITY shall record a Notice of Termination in the chain of title in the County of San Mateo Recorder's Office.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

**GRANTORS**

\_\_\_\_\_  
\_\_\_\_\_

(STATE OF CALIFORNIA)  
(COUNTY OF SAN MATEO)

On this \_\_\_\_ day of \_\_\_\_\_, in the year 20\_\_, before me \_\_\_\_\_ a Notary Public in and for said State, personally appeared \_\_\_\_\_

\_\_\_\_\_

[ ] personally known to me OR



[ ] proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) subscribed to the within instrument, and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

ATTEST:

---

WITNESS my hand and official seal

---

Notary Public in and for said State

This is to certify that the Interest in real property conveyed by this deed dated \_\_\_\_\_ from the first part \_\_\_\_\_ to the City and County of San Francisco, a California municipal corporation, is hereby accepted by order of its Board of Supervisors' Resolution No. 18110, Series of 1939, approved August 7, 1957, and the grantee consents to recordation thereof by its duly authorized officer.

Dated: \_\_\_\_\_

By: \_\_\_\_\_  
Director of Property

GRANTEE:  
CITY AND COUNTY OF  
SAN FRANCISCO

By: \_\_\_\_\_  
Mayor

APPROVED AS TO FORM

DENNIS J. HERRERA  
City Attorney

By: \_\_\_\_\_  
Deputy City Attorney

Attachments: Exhibit "A" – Legal Description of Real Property  
Exhibit "B" – Quarterly Noise Map Depicting Location of Real Property

EXHIBIT "A"

Lot \_\_\_ Block \_\_\_ Subdivision No. \_\_\_\_\_

\_\_\_\_\_, San Mateo County, California, as recorded on \_\_\_\_\_ in Book  
\_\_\_\_\_ of Official Maps at page(s) \_\_\_, \_\_\_. \_\_\_.

Assessor's Parcel Number: \_\_\_\_\_

EXHIBIT "B" – Quarterly Noise Map

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## Appendix H

### San Francisco International Airport/Community Roundtable



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## Appendix H

### **SAN FRANCISCO INTERNATIONAL AIRPORT/COMMUNITY ROUNDTABLE**

The San Francisco International Airport/Community Roundtable was created in 1981 to address aircraft noise impacts in neighborhoods and communities near SFO. The Roundtable was created by a Memorandum of Understanding between interested cities and Airport management to monitor the implementation of the recommendations of the 1980 Joint Land Use Study Final Technical Report.

The Roundtable's 45 representatives and alternates are elected officials representing the City and County of San Francisco, San Mateo County, and cities in San Mateo County. Advisory members include airline chief pilots and FAA staff. The SFO Airport Director and his staff support and attend Roundtable meetings presenting both special and regular reports. The Roundtable has been meeting on a regular basis since 1981, and it continues to pursue feasible mitigation actions to address aircraft noise and overflight issues in the communities and neighborhoods near SFO.

The Roundtable monitors a performance-based noise mitigation program implemented by airport staff, interprets community concerns and attempts to achieve noise mitigation through a cooperative sharing of authority among the aviation industry, the FAA, SFO management and local government.

The authority to control aircraft in flight and on the ground is vested exclusively in the FAA. The FAA, however, cannot control the number of flights or the time of day of aircraft operations. Federal law preempts any local government agency from implementing any action that is intended to control the routes of aircraft in flight. The Roundtable, local elected officials, nor airport management can control the routes of aircraft in flight or on the ground.

The Roundtable, one of the oldest and most respected community-based airport noise mitigation organizations in the country, is often used as a model by neighborhood groups wishing to work cooperatively with the aviation industry to improve noise abatement programs. Roundtable meetings are the forum for public discussion about airport noise abatement activities. Regular meetings are held on the first Wednesday of even-numbered months at 7:00 p.m. Meetings are held in the David Chetcuti Community Room at Millbrae City Hall, 450 Poplar Ave, Millbrae, CA 94030.

Agendas and meeting packets are available in advance on the Roundtable website ([www.sforoundtable.org/](http://www.sforoundtable.org/)). All meetings are open to the public, and non-members are offered an opportunity to participate.



The Roundtable has an established work plan that is pursued and discussed at meetings. Information is also available from the Roundtable's professional staff:

Roundtable Coordinator - *Steve Monowitz*, Deputy Director, San Mateo County  
Planning and Building Department, 650-363- 4161

Roundtable activities are funded through San Francisco International Airport, the County of San Mateo, and Roundtable Member Cities. These funds pay for staff and media consulting support including outreach to local press and the website listed above.

**Appendix I**

**Airport Land Use Compatibility Planning Resources**



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## **San Francisco International Airport Website**

[www.flysfo.com/](http://www.flysfo.com/)

## **Websites of Cities influenced by San Francisco International Airport**

Millbrae [www.ci.millbrae.ca.us/](http://www.ci.millbrae.ca.us/)

South San Francisco [www.ci.ssf.ca.us/](http://www.ci.ssf.ca.us/)

Burlingame [www.burlingame.org/](http://www.burlingame.org/)

San Bruno <http://sanbruno.ca.gov/>

San Mateo [www.cityofsanmateo.org/](http://www.cityofsanmateo.org/)

Foster City [www.fostercity.org/](http://www.fostercity.org/)

## **Caltrans Division of Aeronautics Website**

[www.dot.ca.gov/hq/planning/aeronaut/index.html](http://www.dot.ca.gov/hq/planning/aeronaut/index.html)

## **Airport Cooperative Research Program**

Project 03-03: *Enhancing Airport Land Use Compatibility*

[www.trb.org/Publications/Blurbs/Enhancing\\_Airport\\_Land\\_Use\\_Compatibility\\_Volume\\_1\\_163344.aspx](http://www.trb.org/Publications/Blurbs/Enhancing_Airport_Land_Use_Compatibility_Volume_1_163344.aspx) (accessed January 26, 2012)

## **Mineta Transportation Institute, San Jose State University**

MTI Report 06-05: *Applying Smart Growth Principles and Strategies to Resolving Land Use Conflicts Around Airports*

<http://transweb.sjsu.edu/mtiportal/research/publications/summary/0605.html> (accessed January 26, 2012)

## **Federal Aviation Administration's Land Use Webpage**

Federal Aviation Administration, "Compatible Land Use,"

[www.faa.gov/airports/environmental/land\\_use/](http://www.faa.gov/airports/environmental/land_use/) (accessed January 26, 2012).

## **Federal Aviation Administration, Obstruction Evaluation / Airport Airspace Analysis (OE/AAA)**

Webpage -- <https://oeaaa.faa.gov/oeaaa/external/portal.jsp> (accessed January 26, 2012)

26, 2012).

**Notice Criteria Tool --**

<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm> (accessed January 26, 2012).

**2011 California Airport Land Use Planning Handbook**

California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011.

<http://www.dot.ca.gov/hq/planning/aeronaut/documents/AirportLandUsePlanningHandbook.pdf> (accessed January 26, 2012).

**Federal Aviation Regulations Part 150 (14 CFR Part 150)**

GPOAccess.gov, "Title 14 Aeronautics and Space,"

<http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200314> (accessed January 26, 2012).

**Other State Airport Land Use Planning Handbooks**

***Wisconsin***

Wisconsin Department of Transportation, *Wisconsin Airport Development Handbook*,

[www.dot.wisconsin.gov/library/publications/topic/air/apt-devel.pdf](http://www.dot.wisconsin.gov/library/publications/topic/air/apt-devel.pdf)  
(accessed January 26, 2012).

***Oregon***

Oregon Department of Aviation, *Airport Land Use Compatibility Guidebook*,

[www.oregon.gov/Aviation/landuseguidebook.shtml](http://www.oregon.gov/Aviation/landuseguidebook.shtml) (accessed January 26, 2012).

***Minnesota***

Clarion Associates, *Airport Land Use Compatibility Manual*,

[www.dot.state.mn.us/aero/avoffice/planning/airportcompmanual.html](http://www.dot.state.mn.us/aero/avoffice/planning/airportcompmanual.html)  
(accessed January 26, 2012).

***Iowa***

Mead & Hunt, *Iowa Airport Land Use Guidebook*,

<http://www.iowadot.gov/aviation/airports/IowaAirportLandUseGuidebook2008.htm> (accessed January 26, 2012).

**Appendix J**  
Interactive Airspace Tool



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## Appendix J

### INTERACTIVE AIRSPACE TOOL

San Francisco International Airport, a department of the City and County of San Francisco, in consultation with the City/County Association of Governments of San Mateo County (C/CAG), has developed a web-based, interactive tool to evaluate the relationship of proposed buildings with the critical airspace surfaces associated with the Airport. Known as the iALP Airspace Tool, it was designed for use by planners, developers, and other interested persons. The tool is intended to assist with the implementation of the airspace protection policies of the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.

Use SFO's online tool for aeronautical surface height evaluation to assess potential conflicts between the proposed structure and the critical aeronautical surfaces. Contact the SFO Bureau of Planning and Environmental Affairs at (650) 821-8211 for training and access to the tool.

The iALP Airspace Tool is provided by San Francisco International Airport and C/CAG as a planning tool. Use of the tool does not release a developer from the obligation to comply with Code of Federal Regulations, Title 14, Part 77 (Safe, Efficient Use and Preservation of the Navigable Airspace), Subpart B.

The remainder of this Appendix includes a tutorial explaining the use of the iALP Airspace Tool.



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## iALP Airspace Tool Tutorial

### INTRODUCTION

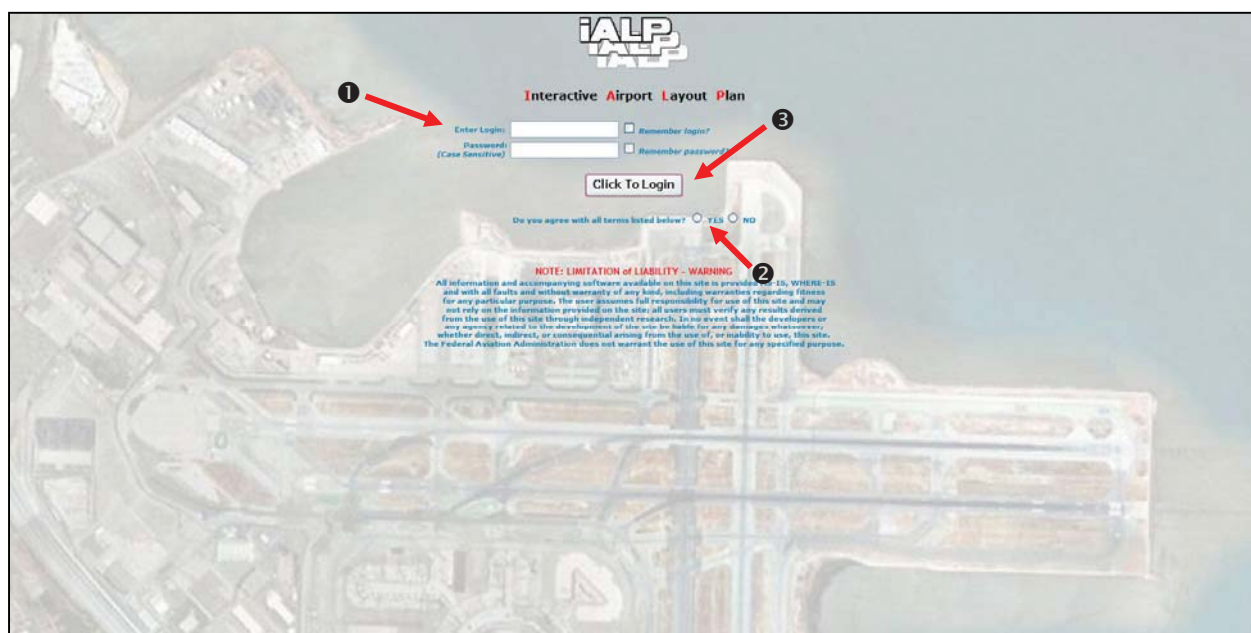
The purpose of C/CAG's iALP Airspace web tool is to allow the user to input information about a proposed construction project, such as its height and location, and find out if the proposed construction would penetrate airspace protection surfaces associate with aircraft arrival and departure operations at San Francisco International Airport (SFO).

This tutorial explains how to use C/CAG's iALP Airspace web tool to determine safe building heights relative to SFO critical airspace surfaces. Users will be able to use the tool to determine: (1) The maximum allowable building height at a given site, and (2) whether a building penetrates a critical airspace surface, and by how much, given a proposed building height at a specified site. Instructions for both uses are outlined in the following steps.

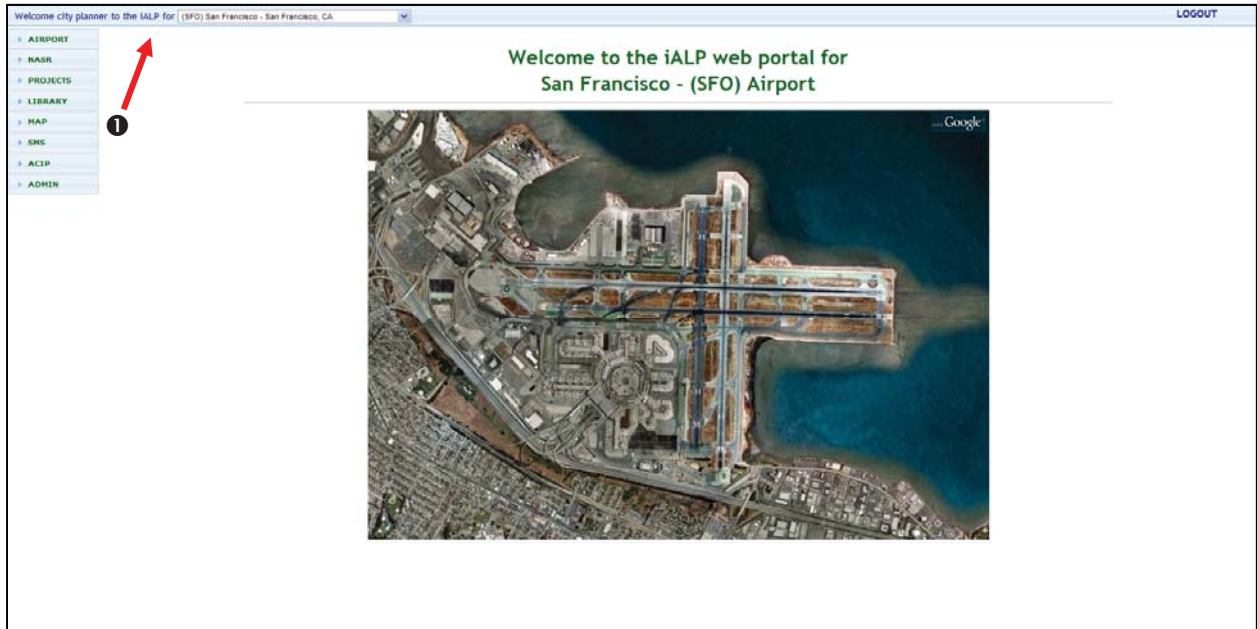
*Note: Compatibility View Settings under "Tools" in Internet Explorer 8.0 must be set to "Display all Websites in Compatibility View" for the airspace evaluation tool to perform correctly.*

### STEP-BY-STEP TUTORIAL

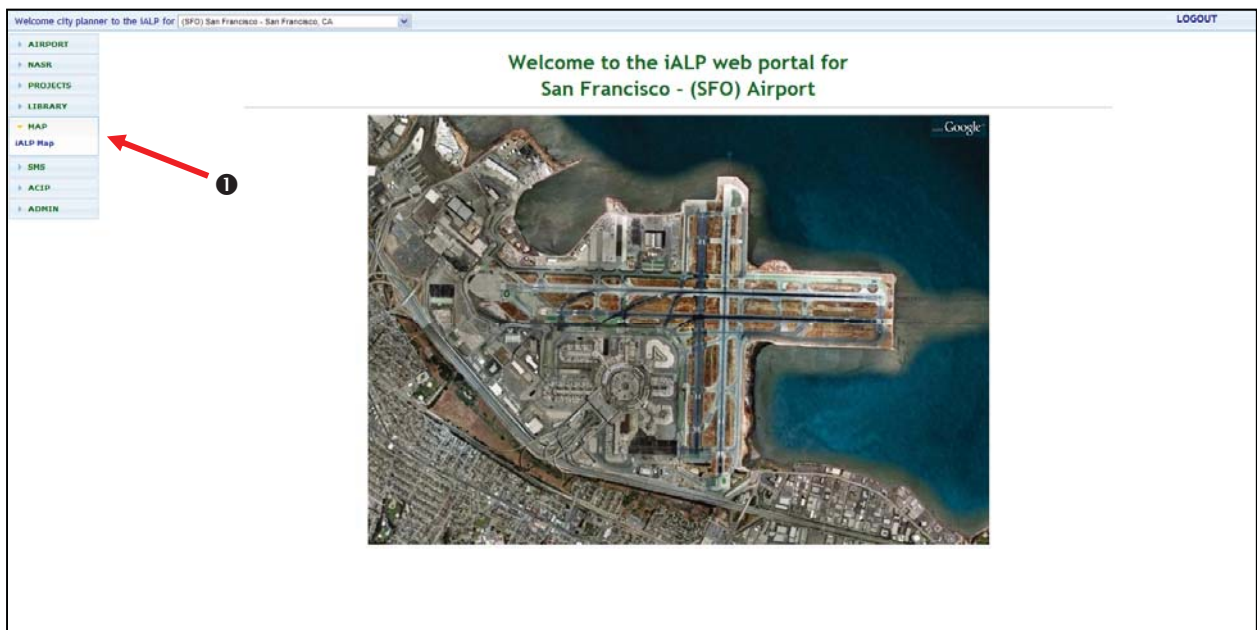
1. **Login.** Open a web browser (Internet Explorer 7.0 is recommended), and navigate to: <http://ialp.airplanonline.com>. ❶ Enter login as "cplanner" and enter password "cplanner". ❷ Agree to the Limitation of Liability Warning by selecting the "Yes" radio button. ❸ Then press the "Click to Login" button.



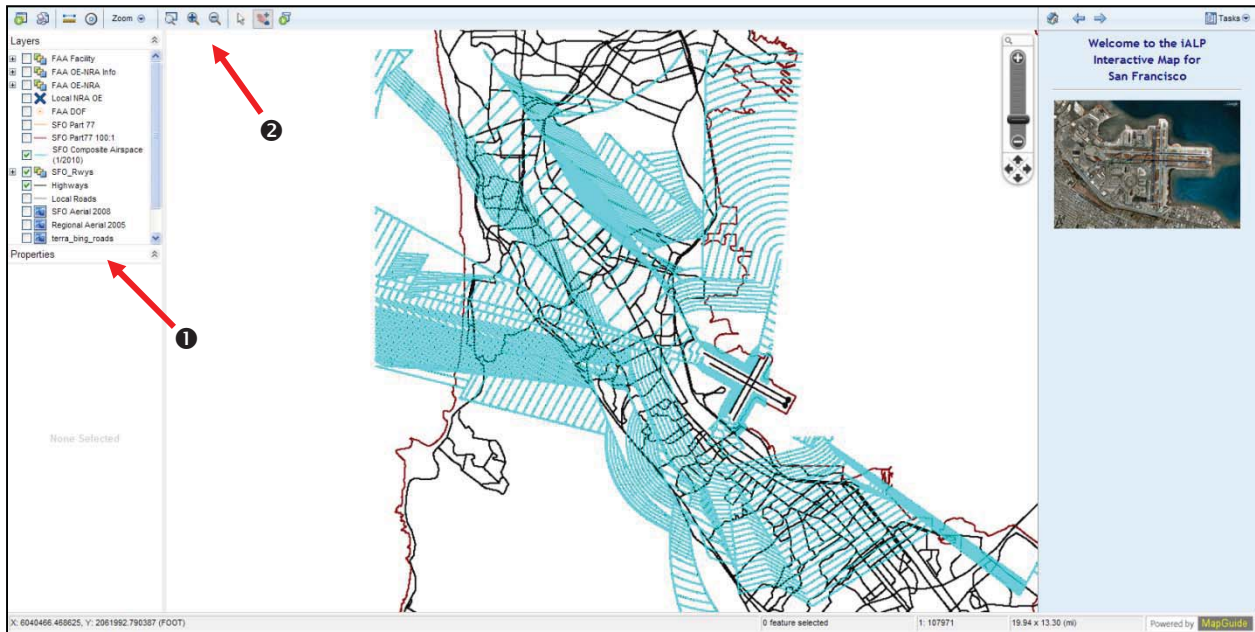
2. **Welcome Page.** Once the iALP welcome page loads, ❶ select “SFO” from the dropdown menu in the upper left hand corner.



3. **Select Map.** Once the SFO home page loads, ❶ select “MAP” then “iALP Map” from the navigation menu on the left side of the page. A new window opens.



4. **Map Page.** The new window will display a map of SFO and environs. ❶ The left sidebar displays the available GIS data layers, which can be toggled on and off from view. An explanation of the data layers that might be used in this exercise is provided in the table below. ❷ Map navigation tools are located in the top-left corner of the map window.



This screenshot shows a map with the Highways and Composite Airspace layers displayed.

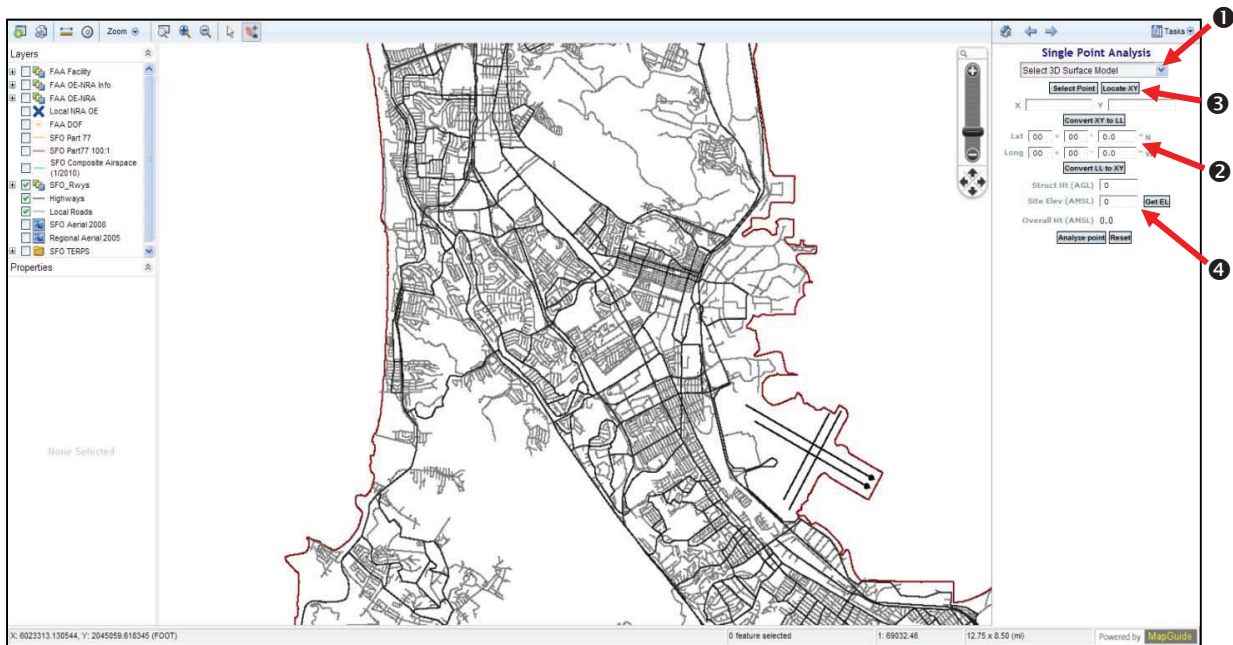
#### GIS Data Layers and Descriptions

GIS Data Layer	Description
FAA OE-NRA	Sites of previously proposed developments at or near SFO that have undergone aeronautical study
FAA DOF	Sites of previously proposed developments at or near SFO that have undergone aeronautical study and have either resulted in a determination or finding that required marking or lighting, or found the proposal to be a hazard to air navigation
FAA Facility	Various FAA facilities, including airports and heliports
SFO Part 77	Federal Aviation Regulations (FAR) Part 77.19 Civil Airport Imaginary Surfaces
SFO Part 77 100:1	FAR Part 77 notification surface; if a proposed construction would penetrate this surface it is necessary to notify the FAA of the project by filing a Form 7460-1 with the FAA
SFO Composite Airspace (1/2010)	Composite of all critical airspace surfaces considered in the obstruction analysis
SFO_Rwys	SFO Runways
Highways	Major streets and highways
Local Roads	Local roads
SFO Aerial 2008	Aerial photo overlay of SFO
Regional Aerial 2005	Aerial photo overlay of airport environs
SFO TERPS	U.S. Standard for Terminal Instrument Procedures; these show the airspace protection surfaces associated with each runway end at SFO

- Single Point Analysis Task.** ❶ Click on the “Tasks” dropdown menu in the upper right hand corner, and select “Single Point Analysis.”



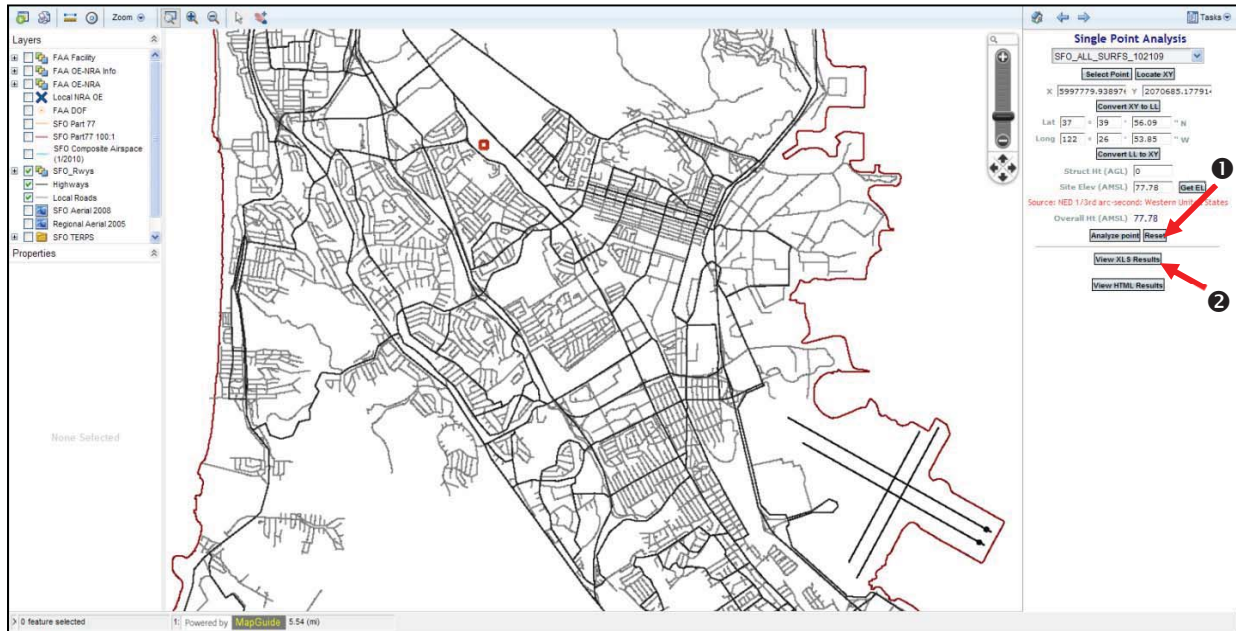
- Site Data.** ❶ From the “Select 3D Surface Model” dropdown menu, select “SFO\_ALL\_SURFS\_102109”. ❷ Enter the latitude and longitude for the subject site in their respective fields, then click “Convert LL to XY.” Or, if the lat-long coordinates are unknown, use “Select Point” to choose a site on the map. ❸ Click “Locate XY” to mark the subject site with a symbol (zoom level may need to be adjusted to locate the symbol). ❹ If the site elevation is known, then enter it in the “Site Elev” field. Otherwise, click “Get EL” to retrieve the site elevation.



- Run Analysis.** From here you can determine either: (1) the maximum building height for the selected site, or (2) whether a proposed building penetrates a critical airspace surface. Both applications are outlined below.

### 1. Determine Maximum Building Height

Leave "0" in the "Struct Ht" field. ❶ Click "Analyze Point". ❷ Once the analysis is complete, the results can be viewed as an HTML webpage or Excel spreadsheet.



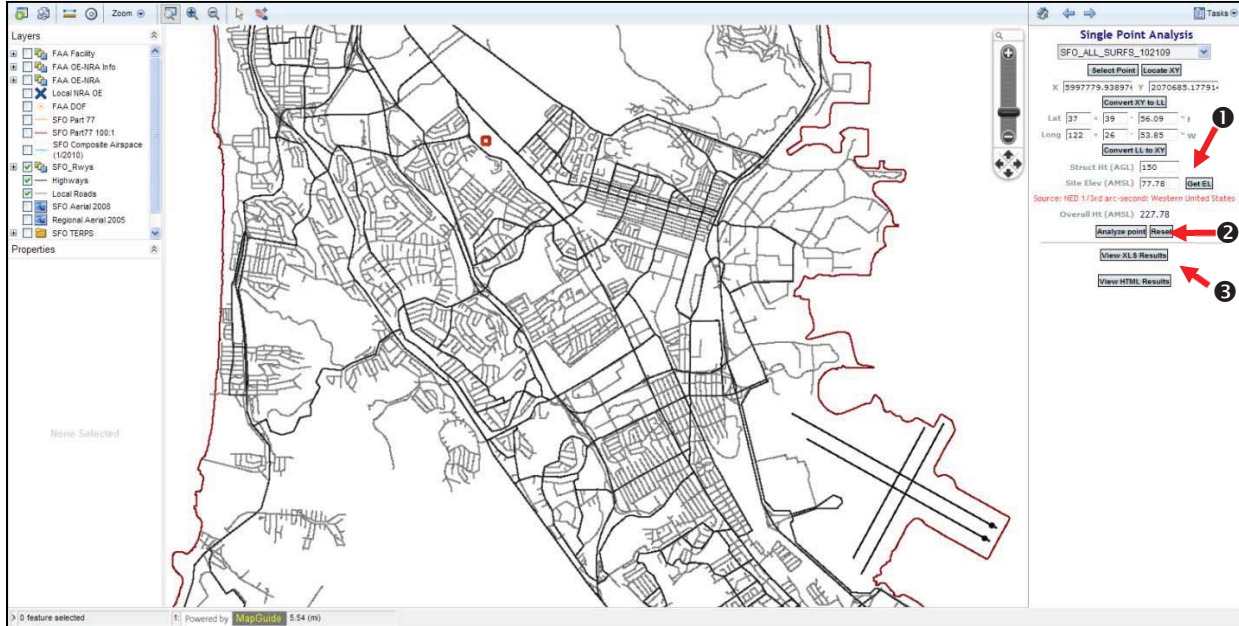
**Understanding the Results.** The "Under By" column returns the maximum height above the ground at the site (abbreviated as AGL) to which a structure could be built on this site without penetrating a critical airspace surface.

SURFACE INTERSECTION ANALYSIS INFORMATION - AIRPORT CODE "SFO"								
Coordinate System:			Date: 02/14/11			Model: SFO_ALL_SURFS_102109		
Latitude	Longitude	Site El.(AMSL)	Struct Ht.(AGL)	Overall Ht.(AMSL)	Max Ht. (AMSL)	Exceeds By	Under By	Surface
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	321.24		243.46	SFO_RW28LR_OEI_Corridor_090309
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	514.06		436.28	SFO_RW28R_IFR_STND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	548.34		470.56	SFO_RW28L_IFR_STND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	691.5		613.72	SFO_RW28R_IFR_NonSTND_Departure_2000
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	695.08		617.3	SFO_RW28R_IFR_NonSTND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	734.88		657.1	SFO_RW28L_IFR_NonSTND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	768.29		690.51	SFO_RW28L_DP_GAP3
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	802.29		724.51	SFO_RW10L_LNAV_Final_Approach_1
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	844.58		766.8	SFO_RW28R_ILS_CAT2_Missed_Approach_F
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	853.22		775.44	SFO_RW28R_ILS_CAT2_Missed_Approach_11
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	929.59		851.81	SFO_RW01L_IFR_STND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	0	77.78	953.1		875.32	SFO_RW01R_IFR_STND_Departure

In this example, the maximum height is 243.46 feet AGL.

## 2. Determine Whether A Proposed Structure Penetrates a Critical Airspace Surface

1 Enter the proposed building height (AGL, in feet) in the “Struct Ht” field. The “Overall Ht” field should automatically return the sum of “Struct Ht” and “Site Elev.” 2 Click “Analyze Point”. 3 Once the analysis is complete, the results can be viewed as an HTML webpage or Excel spreadsheet.



In this example, we have entered a Structure Height of 150 feet AGL.

**Understanding the Results.** The results of this analysis will indicate whether the proposed structure penetrates a critical airspace surface.

- If there is a number under the “Exceeds By” column heading, the proposed structure **does** penetrate a critical airspace surface by the amount indicated.
- If there is a number under the “Under By” column heading, the proposed structure **does not** penetrate a critical airspace surface, and remains under the surface by the amount indicated.

SURFACE INTERSECTION ANALYSIS INFORMATION - AIRPORT CODE "SFO"								
Coordinate System:			Date: 02/14/11			Model: SFO_ALL_SURFS_102109		
Latitude	Longitude	Site El.(AMSL)	Struct Ht.(AGL)	Overall Ht.(AMSL)	Max Ht. (AMSL)	Exceeds By	Under By	Surface
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	321.24		93.46	SFO_RW28LR_OEI_Corridor_090309
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	514.06		286.28	SFO_RW28R_IFR_STND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	548.34		320.56	SFO_RW28L_IFR_STND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	691.5		463.72	SFO_RW28R_IFR_NonSTND_Departure_2000
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	695.08		467.3	SFO_RW28R_IFR_NonSTND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	734.88		507.1	SFO_RW28L_IFR_NonSTND_Departure
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	768.29		540.51	SFO_RW28LR_DP_GAP3
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	802.29		574.51	SFO_RW10L_LNAV_Final_Approach_1
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	844.58		616.8	SFOF_RW28R_ILS_CAT2_Missed_Approach_F
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	853.22		625.44	SFO_RW28R_ILS_CAT2_Missed_Approach_11
37° 39' 56.0900"	122° 26' 53.8500"	77.78	150	227.78	929.59		701.81	SFO_RW01L_IFR_STND_Departure

In this example, the proposed structure is under the lowest critical airspace surface by 93.46 feet.

## **Appendix K**

### **Documentation of Local Consultation Process**







## **Project Advisory Committee**





# AIRPORT LAND USE COMPATIBILITY PLAN FOR THE ENVIRONS OF SAN FRANCISCO INTERNATIONAL AIRPORT

## PROJECT ADVISORY COMMITTEE CONTACT INFORMATION

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# **Project Advisory Committee Meeting #1**

February 28, 2008







COMPREHENSIVE AIRPORT LAND USE PLAN & SECTION 160  
LAND USE COMPATIBILITY PLAN  
for the Environs of San Francisco International Airport

Project Advisory Committee  
Meeting #1

February 26, 2008

AGENDA

1. Welcome and introductions - Dave Carbone, C/CAG ALUC Staff
2. Purpose of the study - Dave Carbone
3. Role of the Project Advisory Committee - Mark R. Johnson, Jacobs Consultancy
4. Scope of work and schedule - Mark R. Johnson, Jacobs Consultancy
5. Airport compatibility concepts and issues - Mark R. Johnson, Jacobs Consultancy
  - a. Noise compatibility
  - b. Safety compatibility
  - c. Airspace protection
6. Local government participation and responsibilities - Dave Carbone and Christopher Duerksen, Clarion Associates
7. Discussion: Airport compatibility-related development challenges in the area
8. Next meeting - schedule and preliminary agenda



Brisbane:

- Lots of open space, fill from 1906 earthquake → develop into commercial, new marina
  - Not higher than existing buildings
- Concerns about airport:
  - Shoreline departure – right turn east on front east at Route 101
  - If aircraft cross Route 101 further west, Brisbane and downtown old South San Francisco get a noise impact
- Extension at Geneva Avenue to Route 101, transit hub with 3<sup>rd</sup> Street

Burlingame:

- Not much new development
- Airport Boulevard empty lots – approved for office buildings, not now in economic downturn...Old Hyatt theaters may be redeveloped into hotels
- Redevelop commercial zone near Millbrae BART

County General:

- Concerned with noise impacts to major businesses

June (Daly City):

- Daly City is the second densest city in California behind San Francisco
- Expecting significant growth in Cow Palace/Geneva Avenue area, including housing, shopping, and schools
- Also, development is expected along Mission Street/El Camino
  - Replace dilapidated 3-story buildings
- New hotel at Daly City BART station, 8-10 stories
- Daly City has lots of housing, little jobs/commercial, 30% in poverty, 50% foreign born → communication with residents is difficult
- Biggest complaints are regarding noise – old houses, single-pane windows

San Bruno:

- Crossing development – 1,000 residential units across from the Tanforan mall
- Next Residential Housing Needs Assessment (RHNA) cycle – Transit Oriented Development (TOD) near BART/Caltrain
- No new housing within 70 DNL – but that's close to BART
- Caltrain relocating to downtown; will promote housing there
- Voter approval for any building over 50 feet in height, probably never over 75 feet

Caltrains Spokesperson:

- Commend everyone for getting together, first of its kind...only one public meeting?
  - No, other meetings will also be open to the public
- Roundtable, Airport Land Use Committee (ALUC), project website?
- C/CAG meeting soliciting comments
- San Mateo County unincorporated areas – Country Club and Broadmoor – residential, noise concern

John (San Mateo County):

- Who trumps who – city vs. airport? The impression is that cities hold trump cards
- General plans for future development should comply with the CLUP
- FAA requires notification (FOR an 7460-1) as Federal process
- FAA determination gives information for local authorities to factor into planning/zoning/building permits
- Caltrans – ok except for building height issue
- Runways too close together – need longer, more widely spaced runways
- Future runway configuration should be taken into account

Mark Johnson (Jacobs Consultancy):

- Yes, regulations require CLUP to take Master Plan/ALP development into account
- Master Plan/ALP don't show new runways

Mark (San Mateo County):

- Unincorporated areas – Burlingame Hills, San Mateo Highlands
- Built out new hotel at Montana
- 55 new residential units on coast north at Half Moon Bay
- San Mateo County is unique – 75% open space, 25% urban, dense 20 cities with shortage of land
- Pressure from state to develop housing
- Develop Grand Boulevard – El Camino Real corridor – infill with denser housing

Bert Ganouny:

- Work with community, tenants, and FAA to minimize noise impacts
- Outreach, openness

Susy (South San Francisco):

- East at Route 101 – biotech hub
  - No height limits, just FAA limits
  - 5 story biotech buildings are 100 feet tall
- Prohibit residential development east of Route 101
- RHNA pressure for 1,600 new housing units
- Grand Boulevard housing development
  - 50-foot height limit, but increasing to 7 or 8 stories
- Caltrain near downtown – 7-8 story residential development; also near San Bruno BART station

Danielle Rinsler (SFO):

- From a cost, mitigation, and environmental standpoint, new runways are not on the table; they are a last resort
- The regional airport planning committee is looking at alternatives to SFO, OAK, and SJC
- New large aircraft are quieter than existing aircraft
- SFO is trying to shrink environmental footprint and retain capacity
- Building heights are a sensitive issue – safety
- SFO is a regional asset, very constrained

Rich (Roundtable/ALUC):

- Document under development now that is very important
- Some proposed projects may not have been hazards necessarily, but were bad ideas
- There are places where housing ought not to be built

Mark Johnson (Jacobs Consultancy):

- CLUP is a balancing act
- Must help guide everyone – locate municipalities, ALUC, and SFO Roundtable

Jacobs Consultancy Team:

- Jacobs Consultancy – aviation focus
- Clarion Associates – municipality focus



## **Project Advisory Committee Meeting #2**

May 20, 2008







COMPREHENSIVE AIRPORT LAND USE PLAN & SECTION 160  
LAND USE COMPATIBILITY PLAN  
for the Environs of San Francisco International Airport

Project Advisory Committee  
Meeting #2  
May 20, 2008  
AGENDA

1. Welcome – Dave Carbone, C/CAG ALUC Staff
2. Review of PAC Meeting #1 – Mark R. Johnson, Jacobs Consultancy
3. Noise compatibility Issues – Johnson
4. Safety compatibility Issues – Johnson
5. Airspace protection – Johnson
6. Planning process – Christopher Duerksen, Clarion Associates
7. Potential policy approaches to issues – All
8. Discussion
9. Next meeting – schedule and preliminary agenda – Carbone, Johnson



**SAN FRANCISCO INTERNATIONAL AIRPORT  
COMPREHENSIVE AIRPORT LAND USE COMPATIBILITY PLAN (CLUP) UPDATE**

**Project Advisory Meeting – Number 2**

May 20, 2008

Millbrae Recreation Center

	NAME	PHONE NUMBER	E-MAIL ADDRESS
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5	JOHN LEE	(650) 888-5081	JLEE@CITYOFSANMATEO.ORG
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14	Nixon Lam	(650) 821-5347	Nixon.Lam@flysfso.com
15	Danielle Rinsler	(650) 821-2119	Danielle.Rinsler@flysfso.com

**SAN FRANCISCO INTERNATIONAL AIRPORT  
COMPREHENSIVE AIRPORT LAND USE COMPATIBILITY PLAN (CLUP) UPDATE**

**Project Advisory Meeting – Number 2**

May 20, 2008

Millbrae Recreation Center

	<b>NAME</b>	<b>PHONE NUMBER</b>	<b>E-MAIL ADDRESS</b>
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17	Rowley Vaughan - JC		
18	Bryan Thumber - JC		
19	Eric Bernhard - JC		
20	Chris Duerksen - Clarion		
21	Erica Heller - Clarion		
22	Dave Carbone -		
23	Rich Lapier		
24			
25			
26			
27			
28			
29			
30			

Introduction:

- Dave Carbone reviewed overall meeting, introduction
- Mark Johnson provided an introduction to each person and reviewed PowerPoint slides
- Chris Duerksen – Policy implementation
- Erica Heller – Improve communication between airport and municipalities

Brisbane Planner:

- Noise contours don't cover Brisbane
- But, in reality, we get noise impacts – complaints
  - Dave Carbone – noise contours are average
  - Danielle R – flight track density analysis would help

San Bruno Planner:

- What change is proposed vs. current?
- Not much – need noise insulation and noise easements
- Not same as aviation easement – debate
- Need better definitions of noise vs. aviation easements
- Compliance with Title 21
  - What exactly is in each easement?

Rich Newman:

- CLUP should unify easement process, make consistent for all municipalities, compatible for airport and communities
- When was the CLUP mandated?
  - 1965
- Standards vs. guidelines → be specific
- Safety zones – consultant was casual...FAA study was 1991 → was for accident site distribution

Daly City:

- What about edges of noise contours that may grow in the near future?
- SQL → reduced shows impact – outside 65 DNEL, but bad
- Next working paper – boundary alternatives for coverage areas

Danielle R:

- When do localities have to adopt the CLUP into General Plans?
  - When the CLUP is finalized, although they can override with a super-majority
- New editions of General Plans must take the CLUP into account
- If the ALUC finds the General Plan is inconsistent with the CLUP, the municipality has to contest finding of inconsistency – override action by ALUC that the General Plan is not consistent with the CLUP
- Once the CLUP is finalized, the consultant performs consistency evaluations and makes recommendations
  - Pick one model community

Closing Remarks:

- Next meeting – 5<sup>th</sup> Tuesday in July – 7/29/2008
- Next working paper – Policy Alternatives

## **Project Advisory Committee Meeting #3**

September 16, 2008







COMPREHENSIVE AIRPORT LAND USE PLAN & SECTION 160 LAND USE  
COMPATIBILITY PLAN  
for the Environs of San Francisco International Airport

Project Advisory Committee  
Meeting #3

September 16, 2008

AGENDA

1. Welcome - Dave Carbone, C/CAG ALUC Staff
2. Review of PAC Meeting #2 - Mark R. Johnson, Jacobs Consultancy
3. Noise compatibility policy alternatives - Johnson
4. Safety compatibility policy alternatives - Johnson
5. Airspace protection policy alternatives - Johnson
6. Airport Influence Area definition - Johnson
7. Potential planning coordination policies - Erica Heller, Clarion Associates
8. Update on project schedule - Carbone, Johnson



**Attendees:**

Ann Keihgran – Burlingame  
Bill Meeker – Burlingame  
Susy Kalkin – South San Francisco  
Judith Christensen – Daly City  
Dan Cruet – San Mateo Economic Development  
Danielle Rinsler, Nixon Lam, Bert Ganoug, John – SFO  
Terry Barriem, Andy Kubik – Caltrans  
Elisha Novak – FAA  
Dave Carbone – C/CAG  
Mark Johnson/Byron Thurber – Jacobs Consultancy  
Erica Heller – Clarion Associates

**NOISE Alternatives presentation by Mark Johnson**

**NOISE Discussion**

Rinsler: How do the alternatives compare to the existing regulations, community by community? What about rebuilding? Is there a loophole in the prohibition on new residential that would allow rebuilding on the parcel that is not sound insulated?

Christensen: Unlike some of the other noise sensitive uses (NSUs) discussed, schools have a substantial outdoor component that is not addressed through sound insulation. Daly City is not impacted by this, so they will support the opinions of the jurisdictions that are.

Kalkin: We may not be able to treat churches as distinct from other public assembly uses because of RLUPA. Also, they have a choice where to locate/worship.

Meeker/Kalkin: Either of the alternatives is acceptable, with some preference for Alternative 2 because it is more flexible.

Novak: Prefer Alternative 1. State guidance is a better choice because every use has some outdoor components. Experience shows that this leads to annoyance and then complaints. It is better not to let the developers build NSUs right up next to the 70 DNL contour. There are cases where developers set up a model home in such a way that it faces away from the airport, and they have loud music playing so that when people come to visit they think they can live with it. Then the experience in their actual home is different

Barrie: Housing in the 65 DNL contour would be ok if an aviation easement requirement is in place. That would protect all parties.

Kalkin: South San Francisco already has an aviation easement requirement in place. It is required only with a new entitlement.

Carbone: There are two kinds of easements in the area now. One is associated with new land uses, and the other with the MOU for noise mitigation. Some of the MOU-type had a time limit and are set to expire. The airport has achieved zero noise impact and it is very important that it is maintained.

Rinsler: The focus should be on protecting the population, whether new or existing, whether or not there is an easement. The reality is that the 65 to 70 DNL is a tough place to live and we need to ask, should we add these uses?

Christensen: The problem is that more people are coming, and they need to live somewhere. That fact is coupled with the issue that the most affordable land is generally in the noisy places.

Rinsler/Christensen: We should also consider the social justice element of placing the lowest income people in the noisiest locations.

Terry: Both aviation easements and noise disclosure should be required for new and for existing residential uses.

### **SAFETY Alternatives presentation by Mark Johnson**

#### **SAFETY Discussion (begun before Alternatives presentation complete)**

Kalkin/Meeker/Keihgran: From a practical standpoint it is difficult to deny a similar land use to one that is on the next lot over. To say that an additional nursing home is not safe but the existing ones are is a difficult message.

Christensen: If there is truly a safety issue, it is a concern and we need to protect people.

Kalkin: What has changed? This was not in the last CLUP. When did the state add this policy guidance?

Barrie: Research was done in 1986 and has been in the guidance for some time. General Plans will have to be made consistent with the CLUP.

Carbone: The CLUP policies will only apply to new land use actions, not previous entitlements.

Meeker/Kalkin: Any discretionary local land use decision must be consistent with the General Plan, which must be consistent with the CLUP, so in practice it may affect more than just new entitlements.

Various: Density/Intensity limitations for commercial uses simply don't make sense in such a heavily built environment.

[Similar discussion continues for some time]

Heller: In some other jurisdictions, once the State gives such guidance, if additional such uses are allowed and then an accident occurs, the local government has had to answer citizens asking why they did not heed the new evidence? This may be of concern as well.

**Presentation of Alternative 2 by Johnson**

Kalkin/Meeker/ Keihgran: But how can we say that an existing use is safe and the same, new use is not? There needs to be consistency in the land uses we allow.

Heller: One reason to make a distinction for certain institutional uses is that people have less choice about where to go when they need health care, or education than where they choose to live or shop.

Rinsler: Perhaps the risk in the zones off the end of the Runway 19s is different from the risk in those off the Runway 28s because so little of the annual air traffic occurs off the latter.

Thurber: But the use of the Runway 19s occurs in less-than ideal weather conditions.

Kalkin: Perhaps there could be a finer grain of zones, rather than such large swaths with uniform policies.

**END of Group Discussion**

Other comments received at the meeting but not in front of the group:

Kalkin: Why do the zones have notches? It looks arbitrary. Can we square them off? Some limits on certain uses may make sense, but we need more time to think this through.



# Agency Coordination Meeting

February 16, 2012







# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

*Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay • Hillsborough • Menlo Park  
Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

### **CITY MANAGER AND PLANNING DIRECTOR PRESENTATION ON COMPREHENSIVE AIRPORT LAND USE COMPATIBILITY PLAN FOR THE ENVIRONS OF SAN FRANCISCO INTERNATIONAL AIRPORT**

**DATE:** Thursday, February 16, 2012

**TIME:** 11:30 - 1:30 P.M. (Lunch Provided)

**PLACE:** Millbrae Library  
45 Poplar  
Millbrae, CA

**PARKING:** Available adjacent to and behind building.

\*\*\*\*\*

- 1.0 Introductions
- 2.0 Overview of Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport
- 3.0 Questions and Answers
- 4.0 Next Steps
- 5.0 Adjourn



**Airport Land Use Committee Meeting**

February 16, 2012





# C/CAG

## City/County Association of Governments of San Mateo County

Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay  
• Hillsborough • Menlo Park • Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo  
• San Mateo County • South San Francisco • Woodside

### NOTICE OF REGULAR MEETING

#### ***C/CAG AIRPORT LAND USE COMMITTEE (ALUC)***

**DATE:** Thursday, February 16, 2012

**TIME:** 4:00 p.m.

**PLACE:** City Council Chamber at Burlingame City Hall  
501 Primrose Road, Burlingame, CA 94010

**TEL:** 650/558-7203 (City Clerk)  
(See attached Meeting Location Map)

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### A G E N D A

- 1. Call to Order/Roll Call/Declaration of a Quorum Present** – Richard Newman, ALUC Chairperson/Richard Napier, ALUC Staff
- 2. Information Item:** Public comment on relevant items **not** on the Agenda – Richard Newman **NOTE:** Speakers are limited to 2 minutes. The Committee cannot take action at this meeting on any topics/issues raised under this item.

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**Access for Persons with Disabilities:** The C/CAG Airport Land Use Committee (ALUC) meetings are accessible to persons with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting or who wish to request an alternative format for all meeting materials, should contact **Nancy Blair, C/CAG ALUC Staff, at 650/599-1406**, during regular business hours (8 a.m. – 5 p.m.), at least three working days before the meeting date.

**Access to Public Records:** Public records that relate to any item on the open session Agenda for this meeting are available for public inspection. Those records that are distributed less than 72 hours prior to the meeting are available for public inspection at the same time they are distributed to all ALUC Members, or a majority of the members of the ALUC. The ALUC has designated the C/CAG Office, at 555 County Center, Fifth Floor, Redwood City, CA 94063, for the purpose of making those public records available for inspection. Persons requesting such information should ask for Nancy Blair at the C/CAG Office.

## *Airport Land Use Committee*

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**ALUC Chairperson:**  
**Richard Newman**  
Aviation Representative

**ALUC Vice Chairperson:**  
TBD,

**Airport Land Use Committee (ALUC) Staff:**  
**Richard Napier**, Executive Director – C/CAG  
**Sandy Wong**, Deputy Executive Director – C/CAG.

**Meeting Notice and Agenda for the C/CAG Airport Land Use Committee (ALUC)  
Regular Meeting on February 16, 2012**

Page 2 of 2

**A G E N D A - continued**

3. **Action Item:** Review and comments on the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport - Richard Napier **pp. 1**

*Document is available at: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html)*

- Actions:**
1. Hear ALUC staff and consultant presentation
  2. Solicit Public Comment
  3. Committee Discussion and comments

4. **Action Item:** Consideration of the Airport Land Use Committee Work-Plan for FY 11-12 - Richard Napier **pp. 5**

- Actions:**
1. Hear ALUC staff report
  2. Solicit Public Comment
  3. Committee Discussion
  4. Take action (direct staff to submit an ALUC recommendation to the C/CAG Board, acting as the Airport Land Use Commission)

5. **Action Item:** Election of Airport Land Use Committee Chair and Vice Chair  
Richard Napier

- Actions:**
1. Take Nominations
  2. Vote for Chair then Vice Chair

6. **Information Item:** Review of Correspondence/Information items – Richard Newman

7. **Information Item:** Member Communications/Announcements – Richard Newman

8. **Adjourn** – Richard Newman

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**Note to ALUC Representatives, Alternates, and Interested Persons: The next Regular Meeting of the ALUC is scheduled for Thursday, March 22, 2012, unless otherwise noticed.**

CCAG\_ALUC Agenda 02\_16\_12ver1.doc

2-16-2012.

C/CAGT ALUC meeting.

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JAMES WADLEIGH	SAN MATEO COUNTY AERONAUTS	Jwadleigh@smcgov.org
HERIB PÉREZ	Foster City Council member	HPerez@fosterca.gov
BERT GAROUNG	San Francisco International Airport.	bert.garoung@flysf.com
JOHN BERGENER	SFO - PLANNING	john.bergener@flysf.com
NIXON LAM	SFO - PLANNING	nixon.lam@flysf.com





# C/CAG

Airport Land Use Committee  
Minutes  
February 16, 2012

1. Call to Order/ Roll Call/ Declaration of a Quorum.

George Auld	Aviation Representative
Richard Newman	Aviation Representative
Terry O'Connell	Brisbane
Allan Alifano	Half Moon Bay
Jeffrey Gee	Redwood City
David Pine	County of San Mateo
Ray Buenaventura	Daly City (5:00 P.M.)

2. Information Item:

None.

3. Action Item: Review and comments on the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.

C/CAG staff provided an overview of the process and key issues in the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (ALUCP) and responded to questions.

Mark Johnson, Ricondo Associates, the consultant that developed the ALUCP provided a detailed overview and responded to questions.

Board Comments included the following:

Concern was expressed that the North County cities impacted by the plan were not in attendance.

Concern was expressed about the single event noise impact to Brisbane and that this plan does not address it.

A question was asked about how the ALUCP was funded and why funding was used from SFO.

It was clarified that the same aviation easement for SFO is used by all cities.

The staff proposal for Airport Influence Area (AIA) A was questioned. Shouldnt AIA area A cover the whole County. It was suggested that a similar approach be used with the Committee as was done for San Carlos Airport. This includes an interactive

presentation from the SFO Noise Office such that the Committee could optimize the Airport Influence Area A boundary.

A question was asked on the age of the operations and monitoring data used.

The map should show at least two permanent Noise Monitoring stations for Brisbane.

On the AIA charts why average the number of flights?

Include Brisbane in the AIA A reporting area.

Make certain Daly City staff are engaged in the review process.

It was stated the ALUC review as required in AIA Area B is a double edged sword since it creates more work for the city staff.

Staff and the consultant will make changes to address the issues raised and will bring this back to the ALUC at the next meeting.

4. Action Item: Consideration of the Airport Land Use Work-Plan for FY 11-12.

This item was CONTINUED to the next ALUC meeting.

A copy of the Request for Proposal for Half Moon Bay Airport was requested.

5. Action Item: Election of Airport Land Use Committee Chair and Vice - Chair.

This item was CONTINUED to the next ALUC meeting.

8. Adjourn

Meeting was adjourned at 5:55 P.M.

## C/CAG AGENDA REPORT

Date: February 16, 2012

TO: Airport Land Use Committee

From: Richard Napier - Executive Director, C/CAG

Subject: Review and comments on the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

(For further information or response to questions, contact Richard Napier at 650 599-1420)

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### **Recommendation:**

Review and comments on the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.

### **Fiscal Impact:**

Annual cost impact of \$25-50,000 annually. Function of the number of consistency reviews performed annually.

### **Source of Revenue:**

No identified revenue source. Funds come from the General Fund. Need to work with the airport operator to get funds to support the normal Airport Land Use Commission (ALUC) activities for San Francisco International Airport.

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### **Background:**

C/CAG as the Airport Land Use Commission for San Mateo County is responsible for developing a Comprehensive Airport Land Use Compatibility Plan (CLUP) for all four airports in San Mateo County. These airports include San Francisco International Airport (SFIA), Half Moon Bay, San Carlos, and Palo Alto (shared with Santa Clara County Airport Land Use Commission). These plans must be developed consistent with the California Department of Transportation Division of Aeronautics *Airport Land Use Planning Handbook*, 2011. Because the update of the ALUCP was partially funded by a grant from the Federal Aviation Administration (FAA), the plan update process also must comply with Federal guidance. The ALUCP for all four airports are dated. C/CAG has begun updating the ALUCP. The first ALUCP (also called CLUP) to be updated is for San Francisco International Airport.

In addition to the FAA grant, C/CAG received grants from the California Division of Aeronautics, and SFIA to update the CLUP for San Francisco International Airport. This update was initiated in 2008. It was delayed due to FAA approval of updated noise contours, delay in

completing the Aeronautics Handbook 2011, and approval of the Runway Safety Area Program at SFIA. A draft of the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport is completed and will be presented to the Airport Land Use Committee (ALUC). C/CAG originally hired Jacobs Consultancy, which subcontracted with Ricondo & Associates, Inc., to develop the ALUCP for SFIA.

**Process:**

C/CAG established a Project Advisory Committee to aid in the development of the ALUCP (CLUP) for San Francisco International Airport. The Committee met three times and received initial presentations from the consultant. It was clear given the complex issues for the update of the ALUCP (CLUP) for SFIA and the controversy raised at the Project Advisory Committee meetings that the process needed to be modified. The process that was followed was for the ALUC staff and the C/CAG Executive Director to meet individually with the City Managers and Planning Directors of the primary cities impacted. These included Daly City, Brisbane, South San Francisco, San Bruno, Millbrae, and Burlingame. ALUC staff and the C/CAG Executive Director then met with SFIA Director and Planning Manager. This approach was followed several times on the various critical issues such as noise contour, aviation easement and process, height limits, and Runway Safety Area Program. Each issue was worked until both the Cities and SFIA were satisfied with the approach. After all the major issues were addressed, Ricondo was directed to develop a draft of the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport consistent with the agreement on the issues between the cities and San Francisco International Airport. The draft is completed and is being brought to the Airport Land Use Committee for their comments.

**Major Issues:**

Avigation Easement - The CLUP requires Avigation Easements to be granted to SFIA by developers of certain “conditionally compatible” land uses in the Airport Influence Area. The purpose of the Avigation Easement is to grant an easement to SFIA for the normal operation of aircraft. These include over-flight, vibration, and noise from normal aircraft operation. These easements allow SFIA to operate without a waiver required. The property owner retains all rights associated with regard to abnormal aircraft operation. The Avigation Easement includes a trigger that if the sound increases 3dB for three out of four quarters that the easement is no longer in effect until the noise level is reduced to below 3 dB. The easement must be granted upon receipt of the building permits. Upon notice from the cities that the project is not being built, SFIA must relinquish the Avigation Easement. The detailed language is shown in Appendix G pages 10 thru 17.

Noise - As a result of aircraft engine technology that significantly reduces the sound, the respective noise contours (60, 65, 70 dB CNEL) have significantly been reduced since the original CLUP was adopted. The old noise contour for 70dB is now essentially the current 60 dB contour. This has significantly reduced the overall noise impact from operations at San Francisco International Airport. It is unlikely that the noise contours will be significantly reduced in the future. The CLUP specifically defines the allowable land uses for the greater than 65, 70 75 dB CNEL areas. New housing, hospitals, schools, and places of public assembly

within the CNEL 65 dB contour must be sound-insulated. With one exception, these uses are not allowed within the CNEL 70 dB contour. New housing is allowed between the CNEL 70 and 75 dB contours on existing lots of record, subject to sound insulation. It is important to note that this does limit some housing development in San Bruno on El Camino Real. San Francisco International Airport has an ongoing noise monitoring program. The detailed noise contours are shown in Appendix D - Figure D-2 and Figure D-3.

### Height

A mapping effort was done to illustrate the critical aeronautical surfaces. The aeronautical surfaces include those established in accordance with FAA Order 8260.3B, Terminal Instrument Procedures (TERPS), and One Engine Inoperative (OEI) departures from 28L (to the west through San Bruno Gap). These are mapped and shown in Exhibit IV-17 and Exhibit IV-18. These exhibits depict the lowest elevations from the combination of the OEI procedure surface and all TERPS surfaces. These surfaces indicate the maximum feasible height at which structures can be considered compatible with Airport operations.

An Interactive Airspace Tool has been developed that reflect the critical airspace surfaces that will allow Planners to easily determine the heights that are acceptable on a particular piece of property. This will significantly simplify the task for the city Planners.

### Safety Zones

The Aeronautics Division Handbook (2011) advises the creation of five sets of safety zones associated with each runway at air carrier airports. For the SFIA CLUP, four safety zones were established for Runways 8L-26R and 8R-26L and the north end of Runways 1L-19R and 1R-19L. The fifth zone, the Sideline Zone, was considered to be unnecessary since all land covered by that zone is on Airport property and inside the Airport security fence. SFIA's obligations to comply with FAA airfield design requirements ensures that these areas will remain compatible with Airport operations. The four safety zones include Runway Protection Zone (RPZ), Inner Approach/ Departure Zone (IADZ), Inner Turning Zone (ITZ) and Outer Approach/ Departure Zone (OADZ). All the zones are shown in Exhibit IV-7.

Only three zones are defined off the south end of Runways 1L-19R and 1R-19L. Those include the RPZ, IADZ, and ITZ. No OADZ is designated in that area. In addition, the IADZ and the ITZ are smaller than suggested in the Caltrans guidance. Adjustments were made in these zones based on the very rare use of these runway ends and the flight procedures for these runways that avoid extended, straight-in final approaches and straight-out departures.

Land use restrictions in the safety zones would prohibit the development of new residential areas, schools, hospitals and nursing homes, places of public assembly, critical public utilities, and the manufacture, processing, and storage of hazardous materials. Because the areas within the safety zones are fully developed, however, the land use restrictions within the safety zones have little practical effect. Existing residences off the west and south ends of both sets of runways would become nonconforming uses. Off the south end of Runways 1L-19R and 1R-19L, two places of worship, one hospital and one school would become nonconforming. Parts of

Mills Peninsula Hospital and Mills High School are also inside the proposed safety zones and would become nonconforming uses. Nonconforming buildings may be modified, and they may be reconstructed if destroyed by calamity as long as the degree of nonconformity is not increased. This means that additional dwelling units cannot be added to nonconforming residences, and the size of nonresidential uses cannot be increased.

The safety zones off the north ends of Runways 1L-19R and 1R-19L and 10L-28R and 10R-28L have no impact since they are over San Francisco Bay.

### **CEQA Documentation**

C/CAG has contracted with Ricondo and Associates to do the CEQA analysis of the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. This work is currently underway. The consultant is nearing completion of a CEQA Initial Study. Thus far, it appears that a Negative Declaration will likely be justified. A draft of the initial CEQA analysis is due in February. This will be brought to the Airport Land Use Committee at a future meeting. A recommendation will then be referred to the C/CAG Board for approval.

### **Next Steps:**

C/CAG staff will make changes based on the comments provided at the 2/16/12 ALUC meeting. An ALUC meeting is scheduled for March 22, 2012 to review the document with the final changes. At the 3/22/12 meeting ALUC will be requested to recommend approval to the C/CAG Board. The C/CAG Board will review and consider approval of Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport at the May 10, 2012 meeting. The CEQA document will be submitted to ALUC on May 17, 2012 and to the C/CAG Board on June 8.

### **Document Availability:**

Go to [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html)

**Airport Land Use Committee Meeting**

March 22, 2012







# C/CAG

## City/County Association of Governments of San Mateo County

Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay  
• Hillsborough • Menlo Park • Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo  
• San Mateo County • South San Francisco • Woodside

### NOTICE OF REGULAR MEETING

#### ***C/CAG AIRPORT LAND USE COMMITTEE (ALUC)***

**DATE:** Thursday, March 22, 2012

**TIME:** 4:00 p.m.

**PLACE:** City Council Chamber at Burlingame City Hall  
501 Primrose Road, Burlingame, CA 94010

**TEL:** 650/558-7203 (City Clerk)

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## A G E N D A

1. **Call to Order/Roll Call/Declaration of a Quorum Present** – Richard Newman, ALUC Chairperson/Richard Napier, ALUC Staff
2. **Information Item:** Public comment on relevant items **not** on the Agenda – Richard Newman **NOTE:** Speakers are limited to 2 minutes. The Committee cannot take action at this meeting on any topics/issues raised under this item.
3. **Action Item** - Consideration/approval of Action Minutes for the February 16, 2012 ALUC Regular Meeting **pp. 1**
4. **Action Item** - Election Of ALUC Officers For Calendar Year 2012
  - a. Election of ALUC Chairperson  
**ACTION:** Nominate/Elect Chairperson
  - b. Election of ALUC Vice-Chairperson  
**ACTION:** Nominate/Elect Vice-Chairperson

# *Airport Land Use Committee*

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**ALUC Chairperson:**  
Richard Newman  
Aviation Representative

**ALUC Vice Chairperson:**  
TBD,

**Airport Land Use Committee (ALUC) Staff:**  
Richard Napier, Executive Director – C/CAG  
Sandy Wong, Deputy Executive Director – C/CAG.

**Meeting Notice and Agenda for the C/CAG Airport Land Use Committee (ALUC)  
Regular Meeting on March 22, 2012**

Page 2 of 3

5. **Action Item:** Review and comments on the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport - Richard Napier **pp. 5**

*Document is available at: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html)*

- Actions:** 1. Hear ALUC staff and consultant presentation  
2. Solicit Public Comment  
3. Committee Discussion and comments

6. **Action Item:** Review and comments on the Initial Study and Negative Declaration for the Comprehensive Land Use Plan for the Environs of San Francisco International Airport - Richard Napier **pp. 9**

*Document is available at: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html)*

- Actions:** 1. Hear ALUC staff and consultant presentation  
2. Solicit Public Comment  
3. Committee Discussion and comments

7. **Action Item:** Consideration of the Airport Land Use Committee Work-Plan for FY 11-12 - Richard Napier **pp. 11**

- Actions:** 1. Hear ALUC staff report  
2. Solicit Public Comment  
3. Committee Discussion  
4. Take action (direct staff to submit an ALUC recommendation to the C/CAG Board, acting as the Airport Land Use Commission)

8. **Information Item:** Review of Correspondence/Information items – Richard Newman

**Information:** Request for Proposal (RFP) for Half Moon Bay Airport **pp. 13**

9. **Information Item:** Member Communications/Announcements – Richard Newman

10. **Adjourn** – Richard Newman

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**Note to ALUC Representatives, Alternates, and Interested Persons:** *The next Regular Meeting of the ALUC is scheduled for Thursday, April 19, 2012, unless otherwise noticed.*

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**Access for Persons with Disabilities:** The C/CAG Airport Land Use Committee (ALUC) meetings are accessible to persons with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting or who wish to request an alternative format for all meeting materials, should contact **Nancy Blair, C/CAG ALUC Staff, at 650/599-1406**, during regular business hours (8 a.m. – 5 p.m.), at least three working days before the meeting date.





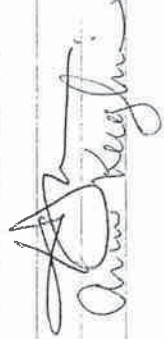
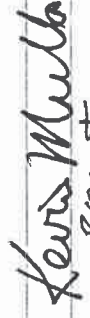
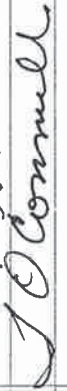






**Meeting Notice and Agenda for the C/CAG Airport Land Use Committee (ALUC)  
Regular Meeting on March 22, 2012**

**Page 3 of 3**

***Access to Public Records:*** Public records that relate to any item on the open session Agenda for this meeting are available for public inspection. Those records that are distributed less than 72 hours prior to the meeting are available for public inspection at the same time they are distributed to all ALUC Members, or a majority of the members of the ALUC. The ALUC has designated the C/CAG Office, at 555 County Center, Fifth Floor, Redwood City, CA 94063, for the purpose of making those public records available for inspection. Persons requesting such information should ask for Nancy Blair at the C/CAG Office.



March 22, 2012 C/CAG Airport Land Use Committee (ALUC) meeting Sign-In Sheet

Name	E-Mail	Organization	Signature
<b>Members/ Alternates</b>			
Alifano, Allan	<a href="mailto:allana@hmbcity.com">allana@hmbcity.com</a>	Half Moon Bay	
Buenaventura, Raymond	<a href="mailto:rbuenaventura@dalycity.org">rbuenaventura@dalycity.org</a>	Daly City	
Deal, Jerry	<a href="mailto:jdeal@burlingame.org">jdeal@burlingame.org</a>	Burlingame	
Ford, Carol	<a href="mailto:carol_ford@sbcglobal.net">carol_ford@sbcglobal.net</a>	South San Francisco	
Garbarino, Rich	<a href="mailto:rich.garbarino@ssf.net">rich.garbarino@ssf.net</a>	Redwood City	Present
Gee, Jeffrey	<a href="mailto:jgee@redwoodcity.org">jgee@redwoodcity.org</a>		
Gottschalk, Robert	<a href="mailto:rgottschalk@svglobal.net">rgottschalk@svglobal.net</a>		
Grassilli, Bob	<a href="mailto:Wiryguy@aol.com">Wiryguy@aol.com</a>	San Carlos	
Grocott, Matt	<a href="mailto:mgrocott@cityofsancarlos.org">mgrocott@cityofsancarlos.org</a>	San Carlos	
Ibarra, Ken	<a href="mailto:kibarra@ci.sanbruno.ca.us">kibarra@ci.sanbruno.ca.us</a>	San Bruno	
Keighran, Ann	<a href="mailto:akeighran@burlingame.org">akeighran@burlingame.org</a>	Burlingame	
Medina, Rico	<a href="mailto:rmedina-web@sanbruno.ca.gov">rmedina-web@sanbruno.ca.gov</a>	San Bruno	
Miller, Raymond	<a href="mailto:rmiller@ci.brisbane.ca.us">rmiller@ci.brisbane.ca.us</a>	Brisbane	
Mullin, Kevin	<a href="mailto:Kevin.Mullin@ssf.net">Kevin.Mullin@ssf.net</a>	South San Francisco	
Newman, Rich	<a href="mailto:rnewman@rochex.com">rnewman@rochex.com</a>		Present
O'Connell, Terry	<a href="mailto:toconnell@ci.brisbane.ca.us">toconnell@ci.brisbane.ca.us</a>	Brisbane	
Okamoto, Steve	<a href="mailto:sokamoto@fostercity.org">sokamoto@fostercity.org</a>	Foster City	
Patridge, Naomi	<a href="mailto:naomip@hmbcity.com">naomip@hmbcity.com</a>	Half Moon Bay	
Perez, Herb	<a href="mailto:hperez@fostercity.org">hperez@fostercity.org</a>	Foster City	
Pine, Dave	<a href="mailto:dave.pine@comcast.net">dave.pine@comcast.net</a>	County of San Mateo	
<b>Staff Support/Interested Parties</b>			
Napier, Richard		C/CAG	Present
Wong, Sandy		C/CAG	
Johnson, Mark	<a href="mailto:m_johnson@ricondo.com">m_johnson@ricondo.com</a>	Ricondo Associates	
Bergener, John	<a href="mailto:john.bergenes@flysfo.com">john.bergenes@flysfo.com</a>	SFO - Planning	
Ganoung, Bert	<a href="mailto:bert.ganoung@flysfo.com">bert.ganoung@flysfo.com</a>	SFIA	
Kehoe, Bill	<a href="mailto:mccbillkehoe@gmail.com">mccbillkehoe@gmail.com</a>	Midcoast Community Council	
Ketcham, Lisa	<a href="mailto:lisa.ketcham@comcast.net">lisa.ketcham@comcast.net</a>		
Lam, Nixon	<a href="mailto:nixon.lam@flysfo.com">nixon.lam@flysfo.com</a>	SFO - Planning	
Stein, Laura	<a href="mailto:laura.stein@comcast.net">laura.stein@comcast.net</a>		
Wadleigh, James	<a href="mailto:jwadleigh@smcgov.org">jwadleigh@smcgov.org</a>	San Mateo County Airport	



# C/CAG

Airport Land Use Committee  
Minutes  
March 22, 2012

1. Call to Order/ Roll Call/ Declaration of a Quorum.

George Auld	Aviation Representative
Richard Newman	Aviation Representative
Terry O'Connell	Brisbane
Allan Alifano	Half Moon Bay
Jeffrey Gee	Redwood City
David Pine	County of San Mateo
Ray Buenaventura	Daly City
Kevin Mullin	South San Francisco
Ken Ibarra	San Bruno
Ann Keighran	Burlingame
Robert Gottschalk	
Carol Ford	Alternate

2. Information Item:

None.

3. Action Item: Consideration/Approval of Action Minutes for the February 16, 2012  
ALUC Regular Meeting APPROVED.

4. Action Item: Election of Officers for Calendar Year 2012

- a- Richard Newman was elected Chair
- b- Ann Keighran was elected Vice Chair

5. Action Item: Review and comments on the Comprehensive Airport Land Use  
Compatibility Plan for the Environs of San Francisco International Airport.

C/CAG staff provided an overview of the process and key issues in the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (ALUCP) and responded to questions.

Mark Johnson, Ricondo Associates, the consultant that developed the ALUCP provided a detailed overview and responded to questions.

Board Comments included the following:



- Airport Influence Area A/B - Show city boundaries under the flight track data.
- Why the cutout on the coast?
- Can we add all three airports together?
- Provide handouts of flight track data for the next meeting.
- Staff make a recommendation for both A and B
- Does this represent the best practice?
- Real Estate disclosure minimum is within 2 miles.
- Purpose of disclosure is to notify that there will be overflights
- Should ask SAMCAR to testify.
- Should do the flight tracking data at 5,000/10,000 and unlimited

Public

Clay Holstine - Expressed concern about aircraft operations and real estate disclosure in Brisbane. Need to have education on this issue. Given the operational issues over Brisbane do not want to have rights subverted.

- 6- Action Item: Review and Comments on the Initial Study and Negative Declaration for the Comprehensive Land Use Plan for the Environs of San Francisco International Airport

Mark Johnson of Ricondo provided an overview of the Initial Study and Negative Declaration for the Comprehensive Land Use Plan for the Environs of San Francisco International Airport and responded to questions. This was an initial draft with work still to be done. It will be brought back at future ALUC meeting.

Board Comments included the following:

50% increase in the exits of a school/ hospital that is in nonconformance may be a problem. These additional exits should be in the expansion are. Staff agreed.  
Does Peninsula Hospital violate airspace?

Board requested that staff resolve all the issues before bringing the item back to ALUC.

- 7. Action Item: Consideration of the Airport Land Use Work-Plan for FY 11-12.

APPROVED

- 8. Information Item: None

- 9. Information Item: None

- 10. Adjourn

Meeting was adjourned at 5:50 P.M.

**Airport Land Use Committee Meeting**

June 21, 2012





# C/CAG

## City/County Association of Governments of San Mateo County

Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay  
• Hillsborough • Menlo Park • Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo  
• San Mateo County • South San Francisco • Woodside

### NOTICE OF REGULAR MEETING

#### *C/CAG AIRPORT LAND USE COMMITTEE (ALUC)*

**DATE:** Thursday, June 21, 2012  
**TIME:** 4:00 p.m.  
**PLACE:** City Council Chamber at Burlingame City Hall  
501 Primrose Road, Burlingame, CA 94010  
**TEL:** 650/558-7203 (City Clerk)

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## A G E N D A

1. **Call to Order/Roll Call/Declaration of a Quorum Present** – Richard Newman, ALUC Chairperson/Richard Napier, ALUC Staff
2. **Information Item:** Public comment on relevant items **not** on the Agenda – Richard Newman **NOTE:** Speakers are limited to 2 minutes. The Committee cannot take action at this meeting on any topics/issues raised under this item.
3. **Action Item -** Consideration/approval of Action Minutes for the March 22, 2012 ALUC Regular Meeting **pp. 1**
4. **Action Item:** Review and comments on the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport - Richard Napier **pp. 5**  
*Document is available at: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html)*

**Actions:**

1. Hear ALUC staff and consultant presentation
2. Public Comment
3. Committee Discussion and comments
4. Recommend ALUCP document for Initial Study and Negative Declaration

*Airport Land Use Committee*

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**ALUC Chairperson:**  
Richard Newman  
Aviation Representative

**ALUC Vice Chairperson:**  
TBD,

**Airport Land Use Committee (ALUC) Staff:**  
Richard Napier, Executive Director – C/CAG  
Sandy Wong, Deputy Executive Director – C/CAG.

**Meeting Notice and Agenda for the C/CAG Airport Land Use Committee (ALUC)  
Regular Meeting on March 22, 2012**

**Page 2 of 2**

5. **Action Item:** Status update on the Initial Study and Negative Declaration for the Comprehensive Land Use Plan for the Environs of San Francisco International Airport - Richard Napier

*Document is available at: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html)*

- Actions:**
1. Hear ALUC staff and consultant presentation
  2. Solicit Public Comment
  3. Committee Discussion and comments

6. **Action Item:** Consideration of the Scope of Work for the Half Moon Bay Airport Land Use Compatibility Plan – Sandy Wong **pp. 11**

- Actions:**
1. Hear ALUC staff report
  2. Solicit Public Comment
  3. Committee Discussion

7. **Information Item:** Review of Correspondence/Information items – Richard Newman See Attachment B

8. **Information Item:** Member Communications/Announcements – Richard Newman

9. **Adjourn** – Richard Newman

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**Note to ALUC Representatives, Alternates, and Interested Persons:** *The next Regular Meeting of the ALUC is scheduled for Thursday, July 19, 2012, unless otherwise noticed.*

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***Access for Persons with Disabilities:*** The C/CAG Airport Land Use Committee (ALUC) meetings are accessible to persons with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting or who wish to request an alternative format for all meeting materials, should contact **Nancy Blair, C/CAG ALUC Staff, at 650/599-1406**, during regular business hours (8 a.m. – 5 p.m.), at least three working days before the meeting date.

***Access to Public Records:*** Public records that relate to any item on the open session Agenda for this meeting are available for public inspection. Those records that are distributed less than 72 hours prior to the meeting are available for public inspection at the same time they are distributed to all ALUC Members, or a majority of the members of the ALUC. The ALUC has designated the C/CAG Office, at 555 County Center, Fifth Floor, Redwood City, CA 94063, for the purpose of making those public records available for inspection. Persons requesting such information should ask for Nancy Blair at the C/CAG Office.

**Written Comments Received**







# CITY OF DALY CITY

333-90TH STREET

DALY CITY, CA 94015-1895

PHONE: (650) 991-8000  
February 28, 2012

Richard Napier  
Executive Director  
City/County Association of Governments of San Mateo County  
555 County Center, 5<sup>th</sup> Floor  
Redwood City, CA 94063

Re: Draft Comprehensive Airport Land Use Compatibility Plan

Mr. Napier:

This letter provides the following general comments for the City of Daly City on the Draft Comprehensive Airport Land Use Compatibility Plan (ALUCP) for San Francisco International Airport, dated February 2012:

1. General Policy GP-4.1 (page III-5) and the corollary definition of Non-Conforming Uses should be clarified to reflect that uses which can demonstrate a conditionally-compatible condition, such as allowance of residential uses within the 65-70 dB noise contour identified in Table IV-1 (page IV-18), would in fact be considered conforming uses.
2. Airspace Protection Policy AP-3 (page IV-53) provides that "in order to be deemed consistent with the CLUP, the maximum height of a new building must be the lower of the height shown on the SFO critical aeronautical surfaces map ..." However, the corresponding map (Exhibit IV-17) identifies a range of maximum heights of critical aeronautical surfaces. For example, at locations identified on Exhibit IV-17 where the Feet Above Ground Level (AGL) is identified as being between 65 and 100 feet, it is unclear what the effective limit may be. Clarification of this policy would help reduce potential for confusion over how this height is measured.

Please be advised that the City is presently completing a comprehensive update of the General Plan, a draft copy of which may be viewed at [www.dalycity.org/gp](http://www.dalycity.org/gp). The City is now in the process of initiating the environmental review process for the Plan and the



City hereby requests that the ALUC advise us of any ALUC action that may be necessary before the City proceeds to adopt the Plan.

Should you have any questions about the City's comments on the ALUCP or the City's Draft General Plan, please feel free to contact Mike Van Lonkhuysen, our General Plan Project Manager, at (650) 991-8033.

Sincerely,

A handwritten signature in black ink, appearing to read "B Millar". The signature is written in a cursive, slightly slanted style.

Brian Millar  
Director of Economic and Community Development

**C/CAG**  
**CITY/COUNTY ASSOCIATION OF GOVERNMENTS**  
**OF SAN MATEO COUNTY**

*Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay • Hillsborough • Menlo Park • Millbrae • Pacifica •  
Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

April 6, 2012

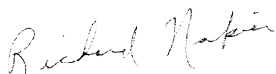
Planning Director:

C/CAG released a draft of the Airport Land Use Compatibility Plan for the environs of San Francisco International Airport for review and comments on January 30, 2012. Numerous comments have been received and responded to and two Airport Land Use Committee meetings have been held. For the March 22, 2012 meeting a change document was created for Chapters 3 and 4 to show the recommended changes. The complete initial report can be found at [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html). The changed Chapter 3 and Chapter 4 can be found at [www.ccag.ca.gov/aluc.html](http://www.ccag.ca.gov/aluc.html). **It is requested that any remaining comments on the document be provided to C/CAG by 4/20/2012.**

C/CAG staff will then develop the final draft that will be completed and released by 4/27/2012. This will not be placed on the ALUC Committee agenda until 6/21/2012 such that any policy issues that may occur can be taken to the respective Council for direction. This will then be placed on the agenda for the 6/21/2012 ALUC Committee meeting with a staff recommendation that the ALUC Committee recommend that it be approved by the Airport Land Use Commission (C/CAG Board). This will then be placed on the agenda for the 8/9/2012 Airport Land Use Commission (C/CAG Board) meeting for final approval.

Thank you for your comments and participation.

Sincerely;



Richard Napier  
Executive Director



Richard,

Thanks again for taking the time to come to Daly City this week and meet with me to discuss the ALUC Plan. At this point, our intent is to await receipt of the updated Draft next week. We will then use the intervening period to review the document and offer any additional comments. As I mentioned, I think the key issues for Daly City will focus on height limitations that may impact the potential Seton Medical Center project (how height is measured under the ALUC, and effective height limits for new construction), the 65-70 decibel noise contour and corollary noise mitigation that would be required for new construction, and the proposed use of aviation easements.

Cordially,

Brian Millar

---

**From:** Richard Napier [mailto:rnapier@smcgov.org]  
**Sent:** Friday, April 06, 2012 5:05 PM  
**To:** Aaron Aknin; Brian Millar; Farhad Mortazavi; John Bergener; John Swiecki; susy.kalkin@ssf.net; William CD/PLG-Meeker  
**Cc:** m\_johnson@ricondo.com; Sandy Wong  
**Subject:** Airport Land Use Compatibility Plan for the Environs of SFIA: COMMENTS DUE 4/20/2012

**Please provide final comments on the Airport Land Use Compatibility Plan by 4/20/2012**

**Please send comments to**

**Richard Napier  
555 County Center Fifth Floor  
Redwood City, CA 94063  
650 599-1420**





## CITY OF BRISBANE

50 Park Place  
Brisbane, California 94005-1310  
(415) 508-2100  
Fax (415) 467-4989

April 16, 2012

Richard Napier  
C/CAG  
555 County Center 5<sup>th</sup> Floor  
Redwood City CA 94063

Re: SFO Airport Land Use Compatibility Plan

Dear Mr. Napier:

Thank you for the opportunity to review the above-referenced document. The City appreciates the changes made to the document preface in response to our previous discussions, clarifying that nothing in the Plan precludes or inhibits the City's ability to continue working with SFO to address ongoing noise concerns.

The City has other concerns related to the same matter. The City recommends that Section 2.2.4 of the draft plan be modified to clarify that the use of CNEL as a noise measurement to define airport noise contours does not reflect the occurrence of single noise events and the potential for such single noise events to be disruptive or annoying within local communities such as Brisbane. As such, in no way should the airport noise contours be construed or assumed to define the geographical limits of the airport's noise impacts on local communities. Additionally, the City does not see the value of creation of Area "A" Airport Influence for the purpose of disclosure. We see this as complicating and confusing issues over single event airport noise and are concerned that the disclosure will potentially be used as a defense against claims or lawsuits regarding this issue. If the plan is going to institute an Area "A" we request exclusion.

Thank you for your consideration in this matter. Please contact me at 415.508.2110 should you have any questions regarding this letter.

Sincerely,

Clay Holstine  
City Manager

C: John Swiecki, Community Development Director







Aaron Aknin  
*Community Development Director*

April 20, 2012

Rich Napier, Executive Director  
C/CAG  
County Office Building  
555 County Center  
Fifth Floor  
Redwood City, California 94063

Dear Rich:

Thank you for giving the City of San Bruno the opportunity to comment on the draft Comprehensive Airport Land Use Compatibility Plan for the Environs of the San Francisco International Airport (CLUP). As you know from our previous discussions, the CLUP is of particular importance to the City of San Bruno, given San Bruno's location and land-use planning objectives. Even minor, unexpected changes to the CLUP can have significant impact on San Bruno's land use plans and land values. With that in mind, I am submitting the following comments and questions about the CLUP. For each comment, I have referenced the applicable page and/or policy number.

- **P-3, Table P-1:** Point number 6 should specifically mention public outreach to property owners and residents within the affected areas of each City. It is a best planning practice to have the public outreach meeting happen prior to the mandatory environmental review period.
- **Page 1-12:** The City understands that the CLUP is intended to regulate land uses that may conflict with airport operations. Stronger statements should be made, however, that acknowledge that cities will work together to encourage new technology, flight scheduling and flight paths that reduce impacts to nearby residents and property owners. For example, late night cargo plane flights should be discouraged, and technology that reduces airplane noise should be encouraged. Land use is just one half of the equation, airport operations also factor.
- **Page I-13, Policy I-13:** Please clarify whether the recent runway expansions have impacts on maximum height limitations. During the airport's environmental review outreach process, the City was told the runway expansions would not impact height limits, however height limits appear to have become more restrictive.



- **Page I-14, First paragraph after bullet points:** Please clarify or define what “expanded or significantly enlarged means”. For example, can a single-family home add a second story? Would an owner of an older apartment building be allowed to tear down the building and construct the same number of units?
- **Page I-15, First Paragraph:** The plan is clear that new restrictions do not apply to existing, incompatible land uses. However, please clarify whether this exemption extends to projects that are entitled through a specific plan or entitlement action, but not yet constructed.
- **Exhibit II-3:** The correct date of the San Bruno General Plan is March 24, 2009. Please review the approved land use exhibits in the approved General Plan and verify that land uses shown in the CLUP are consistent. General Plan diagrams are available online. A hard copy can also be provided.
- **Page II-12:** Add a bullet point under “Development Pressures” that acknowledges that SFO itself increases demand for development in the immediate area.
- **Page II-30, 2.3.2.5:** If more information is available about the frequency of large cargo jets, please provide that information in the plan, as well. The City of San Bruno has received complaints that there has been an increasing amount of large-night cargo jets in recent years.
- **Page III-4 (General Policies):** If possible, it would be useful to see a breakdown comparing this CLUP’s goals versus previous CLUP goals.
- **Page III-5: Policy GP-4.1:** Similar to the comment above, please provide clarification whether a property owner can tear down and rebuild the same number of units? Also, would second units (in-law units) be allowed as provided for under state law?
- **Page III-6: Policy GP-5.1:** Please provide examples about where the “in-fill” provision may be applicable. For example, could a property owner with a vacant lot, build a new single-family home in a 70db area?
- **Page III-7 (GP-8.1, 8.2):** These policies appear to grant SFO greater land use authority than previous CLUPs. It should be clarified that all local land use decisions are still under the authority of the City, and should be reviewed by the ALUC in certain circumstances. In addition to encouraging the cities to meet with SFO staff to discuss development, SFO staff should be encouraged to meet with the cities to discuss proposed changes in operation.
- **Page III-8: GP9:** Has any analysis been done regarding how many policies will be impacted? Can this deadline be extended if changes require General Plan amendments or public outreach processes?

- **Page III-17. GP13.3:** This policy seems to imply that if the airport updates its master plan, then the CLUP must be updated. As we know from previous sections of the plan, if the CLUP is updated, then the City's plan must be updated. If this is true, then the airport is essentially empowered with local land use authority. If this is not the case, please clarify within the plan.
- **Page IV-18. Table IV-1:** Please provide a comparison chart detailing which land uses have been added or removed in this CLUP from the allowed, permitted or non-compatible categories.
- **Page IV-11, Policy IP-2:** This policy states that the CLUP shall exercise statutory duties to proposed land use actions including new general plans... "and related development proposals". It is the City's understanding that only legislative changes to land use categories need to go to the ALUC, not development approvals. Please revise this policy accordingly.
- **Page IV-17, Policy NP-2:** Strike the phrase "shall not be permitted". "Not compatible" appears to be more consistent with California guidelines.
- **Page IV-17, Policy IV-17:** This policy aims to protect the airport, not the resident. Real estate disclosure rules are already in place to notify the resident. Therefore, we would recommend that this policy be more straightforward, and to delete the second point made in the policy that states "to provide notice to real property owners...".
- **Page IV-18:** Strike the word "prohibited". As noted above, "non-compatible" is more consistent with California language.
- **Page IV-20, SP-1:** The introduction of these new zones, specifically the IADZ, is a major concern as this puts additional restrictions on San Bruno property owners. Please see specific comments below.
- **IV-15, SP-2:** Same comment about using the term "prohibited uses."
- **IV-25, Inner Approach Zone:** Per our meeting, certain ancillary uses must still be allowed. For example, employer sponsored child daycare centers are becoming an integral part of many major companies. Also state law requires that daycares be allowed in single-family residential homes, therefore residential daycares should continue to be an allowed use. Critical facilities should also be better defined. For example, water pump stations need to be located in these areas, would they be considered non-compatible city facilities?
- **Page IV-53, Policy AP-3:** The Crossing Specific Plan was approved by the City Council in 2002. San Bruno voters also approved the height limit a decade ago. At that time, an EIR was circulated to the airport and the State. The plan was also reviewed by the ALUC. If the computer models are now correct, this would significantly reduce the allowed height on the hotel parcel which allows a

maximum height of 111 along El Camino. As measured by the new tool, the maximum height would be 72'. This will have a substantial impact of the viability of the site and would reduce the value of the site significantly. In addition, throughout the CLUP process, the City was under the impression that the maximum heights would be well above maximum heights allowed in the Transit Corridors Plan. The City would appreciate an analysis detailing the maximum heights allowed under the CLUP for specific sites in San Bruno, and how those compare to the allowed heights in the Draft TCP.

Thanks you once again for meeting with San Bruno staff and allowing the City to comment on this draft. We also appreciate the many years of hard work that went into this plan. We look forward to working with you, your staff and plan consultants on resolving the comments and questions listed above.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'A' followed by a cursive 'Akin'.

Aaron Akin, AICP  
Community Development Director



San Francisco International Airport

April 20, 2012

Richard Napier  
Executive Director  
City/County Association of Governments of San Mateo County  
555 County Center, 5<sup>th</sup> Floor  
Redwood City, California 94063

**Subject:** *Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport – Comments on March 2012 Draft*

Dear Mr. Napier:

Thank you for notifying San Francisco International Airport (SFO or the Airport) of the opportunity to comment on the latest version of the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (ALUCP). We appreciate this opportunity to coordinate with C/CAG, acting in its role as the Airport Land Use Commission for San Mateo County and the Airport Land Use Committee (ALUC), in considering and evaluating potential land use compatibility issues concerning SFO.

Since the November 2011 revision of the draft ALUCP, the policies have undergone several substantive changes. Notably, the November 2011 revision was updated with the 2020 CNEL noise forecast, and the March 2012 revision introduces new policy concepts in response to these updated contours. With regard to the scope and content of the current draft ALUCP, the Airport has the following comments:

1. Page IV-18, Table IV-1 lists noise-land use compatibility criteria by land use type. Table note (a) specifies a condition under which new residential dwellings could be considered compatible in the CNEL 70 dB contour: “[Residential] use is compatible only under the following conditions: (1) on an existing lot of record if zoned for residential use, (2) on a lot abutting El Camino Real (the Grand Boulevard), or (3) on a lot immediately adjacent to a BART Station.”

The Airport is highly concerned by this new and unprecedented direction taken by the ALUC to set CNEL 70 dB as an appropriate noise level for land use compatibility planning standard. This move is contrary to evolving views by the State of California, and supported by the FAA, that for many airports, “65dB CNEL may be too high of a noise level to be appropriate a standard of land use compatibility planning.” Airport Land Use Planning Handbook, Section 4.2.2. By allowing residential development in the even higher CNEL 70 dB, ALUC is setting compatibility planning policies that are contrary to current views on acceptable noise standards.

**AIRPORT COMMISSION** CITY AND COUNTY OF SAN FRANCISCO

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Of particular concern is the South El Camino Real area in the City of South San Francisco, since several parcels in this area have recently been re-designated for mixed-use residential uses. The portion of the South El Camino Real area within the CNEL 70 dB contour encompasses approximately 30 acres. With potential residential densities of up to 60 dwelling units per acre, this represents a significant portion of South San Francisco's planned housing. According to build-out projections in South San Francisco's general plan, the South El Camino Real area could see an additional 840 housing units; if constructed, approximately 340 of these units could be unduly impacted by aircraft noise within the CNEL 70 dB contour.

Section 4.3 Noise Compatibility Policies of the current draft ALUCP states that the noise compatibility policies exist "to protect the public health, safety, and welfare by minimizing the exposure of residents and occupants of future noise-sensitive development to excessive noise." (page IV-12) All residential uses should be considered incompatible within the CNEL 70 dB noise contour, regardless of context. The prevention of new residential uses within the CNEL 70 dB noise contour has been the longstanding position of the ALUC. The 1996 Comprehensive Airport Land Use Plan for SFO deems residential uses "incompatible; new construction or development should not be undertaken."

The State of California Noise Standards describes the CNEL 65 dB noise contour as the airport's noise impact boundary, defining it as the maximum level "acceptable to a reasonable person residing in the vicinity of an airport." California Code of Regulations, Title 21, Division 2.5, Chapter 6, Section 5006. Any area beyond the CNEL 65 dB contour, including the CNEL 70 dB contour, should be considered unacceptable for new residential uses.

Existing policies in local general plans further reflect the current policy stance on prohibiting new residential uses within the CNEL 70 dB contour. Both the City of South San Francisco and City of San Bruno have existing policies in their respective general plans pertaining to restricted residential development on aircraft noise-impacted lands:

- South San Francisco General Plan Policy 9-I-11: Do not allow new residential or noise sensitive development in the CNEL 70 dB+ areas impacted by SFO operations, as required by Airport Land Use Commission infill criteria.
- South San Francisco Housing Plan Policy 4-4: The City shall not allow new residential or noise sensitive development in the 70 dB+ CNEL areas impacted by SFO operations and shall require avigation easements for new residential development in the area between 65 and 69 dB CNEL SFO noise contours.
- San Bruno General Plan Policy HS-40: Prohibit new residential development within the 70+ Airport CNEL areas, as dictated by Airport Land Use Commission infill criteria.

Furthermore, several jurisdictions around SFO, including the City of South San Francisco and the City of San Bruno were beneficiaries of federal funds from the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP) for noise insulation programs, which the Airport began in 1983. As a condition for receiving the federal grants, individual signatory cities provided assurances that were incorporated into and became part of the grant agreement with the federal government. These grant assurances included "taking appropriate action, including adoption of zoning laws, to the extent

reasonable, to restrict use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal Airport operations, including landing and takeoff of aircraft” and “maintaining zoning and land uses within its jurisdiction that would not reduce the compatibility of the Airport or federally financed noise compatibility measures.”

In the adoption of an airport land use compatibility plan, the ALUC is to be guided by the Airport Land Use Planning Handbook prepared by the Division of Aeronautics of the Department of Transportation. California Public Utilities Code Section 21674.7. The Handbook provides the following:

“For purposes of airport land use compatibility planning, Caltrans advises that 65 dB CNEL is not an appropriate criterion for new noise-sensitive development around most airports. At a minimum, communities should assess the suitability and feasibility of setting a lower standard for new residential and other noise-sensitive development.” (Handbook, p.4-7).

While the caution against using the CNEL 65 dB for most airports may or may not be applicable to the communities around SFO, providing for residential development within the CNEL 70 dB would certainly be contrary to Caltrans’ view of compatibility planning.

Nor could the requirement for sound-insulation substitute for compatibility planning purposes:

“Rather than accepting the use of sound insulation as a mitigation action, ALUC’s primary objective should be to prevent development of land uses that are basically incompatible with the noise conditions.” (Handbook, p. 4-11). “*With regard to new development, sound insulation should be regarded as a measure of last resort. It is not a substitute for good land use compatibility planning in the first place.* [emphasis in original] Exterior noise levels should generally be the primary consideration in evaluation of proposed land uses, especially residentially development and other land uses where noise-sensitive outdoor activities are normal and important features.” (Handbook, p. 4-11)

Similarly, the requirement for the granting of an aviation easement to the airport is no substitute for good land use planning:

“First is the fundamental fact that aviation easements do not change the noise environment. . . . Consequently, ALUCs should not use aviation easement dedication as a principal factor in determining whether a proposed land use is compatible with airport activity. *Unless no feasible alternatives exist, noise-sensitive land uses should be prohibited in high-noise locations regardless of whether an easement is dedicated.*” [emphasis in original]

While SFO recognizes that local and regional planning calls for intensification along major transit corridors such as El Camino Real, compatibility with ongoing aircraft operations is also a necessary goal for sustaining the viability of the Airport as a regional asset. Allowing new residential uses to encroach into the CNEL 70 dB noise contour does not serve to reinforce this goal, and therefore should not be supported by changing a

Mr. Richard Napier

April 20, 2012

Page 4 of 4

longstanding ALUCP policy. The Airport Land Use Compatibility Plan for the SFO Environs should be consistent with the overall goals and objectives of the noise standards for California airports, and Table IV-1 should be amended to prohibit any residential development within the CNEL of 70-75 dB.

2. On page III-6, General Policy GP-5.1 describes the application of noise compatibility policies to infill development: "The proposed project may be deemed consistent with this ALUCP if the proposed project is compatible with the character of the surrounding area *and is otherwise consistent with the applicable general plan or specific plan.*" [emphasis added] As described previously, new residential development within South San Francisco, including the South El Camino Real area, would not be consistent with this ALUCP policy since current local general plan policy precludes the development of infill residential within the CNEL 70 dB contour. Allowing an exception for residential development within the CNEL 70 dB contour would conflict with the direction of General Policy GP-5.1 because local policy consistency with the ALUCP is required with any land use action.
3. Page III-5, General Policy GP-4.2 describes the applicability of ALUCP policies to existing nonconforming schools and hospitals. It is important to ensure that modifications and reconstructions of existing nonconforming uses do not worsen their degree of nonconformity. Similar to General Policy GP-4.3, the following language should be added to GP-4.2: "In all cases, modifications and reconstructions of nonconforming schools and hospitals shall comply with the noise compatibility and airspace protection policies of this ALUCP."

The Airport appreciates your consideration of these comments. Should you have any questions regarding the Airport's comments, please do not hesitate to contact me at (650) 821-7867 or at [john.bergener@flysfo.com](mailto:john.bergener@flysfo.com).

Sincerely,



John Bergener  
Airport Planning Manager  
San Francisco International Airport  
Bureau of Planning and Environmental Affairs

cc: John L. Martin, Airport Director  
Tryg McCoy, COO  
Melba Yee, SFO Legal  
Nixon Lam, SFO Planning



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AND COMMUNITY DEVELOPMENT  
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**CITY COUNCIL 2012**

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BARRY M. NAGEL, CITY MANAGER

April 20, 2012

Richard Napier, Executive Director  
City/County Association of Governments  
555 County Center – 5<sup>th</sup> Floor  
Redwood City, Ca 94063

RE: SSF Comments – Draft Comprehensive Airport Land Use Compatibility Plan (ALUCP)

Dear Mr. Napier:

The City of South San Francisco has reviewed the Draft ALUCP for SFO and offers the following comments:

- *Table IV-1 footnote a.* We have discussed this issue with C/CAG staff and the consultant and appreciate the acknowledgement of the competing issues of the ALUCP and other regional plans with respect to housing location & production. The recent addition of language included in the amended Chapter 4 that addresses housing on properties along El Camino Real (the Grand Blvd.), which are projected to be impacted by the 70-75 dB CNEL contour, is quite helpful in balancing the competing issues of noise compatibility and smart growth housing policies. Similarly, the City would ask that for the same reasons consideration be given to providing the opportunity for housing within ¼ mile of the San Bruno BART station. It is therefore requested that footnote (a) be amended to read:

“ or (3) on a lot ~~immediately adjacent to~~ within ¼ mile of a BART Station...”

- *Table IV-2.* The City notes the recent addition of “biosafety Level 3 & 4 facilities” in the incompatible land use criteria for the Inner Turning Zone (ITZ), which includes a fairly significant swath of the City’s industrial area East of US 101. We are very concerned about the implications of this prohibition and its potential impact on the City’s growing/thriving biotechnology industries, and request additional explanation/clarification.
- *Exhibit IV-11. Airspace Protection.*
  - The map and corresponding text appear to require any new building or alteration within a red designated area, where existing terrain penetrates the Airspace Surface, be required to file an FAA form 7460-1 for its review and determination, regardless of the height of the building or



addition. As most of this area is comprised of existing single family residences, where building heights are limited to 30-35 feet, it seems unduly onerous to trigger this requirement down to this level. The City would request that consideration be given to adding a more reasonable threshold, or providing a single family home exemption.

- o More broadly, the City has concern about how this map was derived and implications for future development opportunities (height limitations) within the City, and would appreciate speaking to C/CAG staff and/or the consultant for a better understanding. The map appears to dramatically reduce the potential heights that the City is trying to achieve within its Priority Development Areas along El Camino Real and in its Downtown, as well as throughout the East of US 101 area, which is obviously very troubling.

Thank you for the opportunity to comment on the Draft ALUCP. We look forward to taking the time necessary to work through these remaining issues with C/CAG staff prior to bringing this to hearing. Thank you in advance for your consideration.

Sincerely,



Susy Kalkin  
Chief Planner

Cc: City Manager  
Assistant City Manager



May 3, 2012

C/CAG of San Mateo County  
County Office Building  
555 County Center  
Fifth Floor  
Redwood City, California 94063

Attn: Mr. Richard Napier, Executive Director

Re: Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

Mr. Napier:

My company, Jensen + Partners is acting as program manager for a new replacement Hospital tower at the Seton Medical Center in Daly City. As you are aware, Seton has recently completed Schematic Architectural Design for a replacement inpatient hospital tower on its campus, this replacement in response to State of California Senate Bill 1953 seismic upgrade mandates. In the course of recent conversation with the City of Daly City, Seton became aware of airspace height restrictions contained in the C/CAG Draft EIR for the San Francisco International Airport (SFO) Comprehensive Airport Land Use Compatibility Plan (CLUP). In its review of the C/CAG document, Daly City has queried Seton concerning the vertical height of both the existing and planned hospital towers, which we believe may be close to or penetrating of critical aeronautical surfaces used by SFO aircraft.

On behalf of the Seton Medical Center, we write to express concern about conflicts between the airspace height restrictions and the design for Seton's new hospital tower. We request clarification of these requirements and consideration of changes to them as necessary to allow continuation of the hospital project's design and construction. Below is a summary of the hospital's situation and recent conversation with the agencies involved with the C/CAG CLUP.

The Seton Replacement Tower project originated with determinations in the 1996 State of California SB1953 Alquist Act legislation, augmented in SB306, which requires Seton to replace seismically deficient inpatient acute care facilities by 1/1/2020. These plans are documented in a 2010 SB306 Master Plan accepted by the California Office of Statewide Health Planning and Development (OHSPD), and further developed in a multi-million dollar Schematic Architectural Design accepted by the Daughters of Charity Health System (DOCHS) Board in January, 2012. This investment represents a significant exposure for the DOCHS because of their charity mission, among other factors. Because of patient care operational planning protocols, the new 10 story tower design rises 179 feet above the site's elevation, 414 feet above sea level. This height is more than thirty feet taller than the existing 1963-vintage 10 story tower.

In the course of interaction with the City of Daly City and subsequent recent conversations with C/CAG, SFO administration and their consultants, we've come to understand the following about process and intentions of the airport's current Land Use Compatibility Planning effort. The plan generally is intended to "provide for the orderly growth of airports and the surrounding areas "to



minimize the public's exposure to excessive noise and safety hazards...". As part of the current study, a new set of graphic and text documents have been created to document the geometry and geography of critical aeronautical surfaces which describe flight path activity of the airport's operations. In the past an offline FAA review procedure has been used to evaluate potential physical interactions between proposed new construction development and these aeronautical surfaces above the SFO region. As we understand it, that FAA process, using a Form 7460 review request, has historically used evaluation tools which have not been broadly published or available to the public or local municipal planning agencies for anticipatory planning. A purpose of the new documentation is to allow awareness and anticipatory planning so that unnecessary conflicts will be less frequent in the future, after adoption of the 2012 CLUP.

In late February 2012, during its review of the C/CAG CLUP draft document, the City of Daly City noticed low height limit designations in the CLUP for the Seton Hospital site, and made inquiries both with the C/CAG for clarification of the requirements, and also to Seton for specific height descriptions of the existing and proposed hospital towers. During March and April, Jensen + Partners has conducted further clarifying conversations with City of Daly City, C/CAG, SFO administration and their consultants which explain the CLUP review process as conducted primarily, or perhaps exclusively among the constituent municipal government agencies and C/CAG. Seton's awareness of the CLUP came at the initiation of the City of Daly City during its review.

By C/CAG and SFO descriptions, the critical aeronautical surfaces newly documented in the CLUP have been in use for many years, and have been developed by extensive and time consuming analysis by the FAA with participation by each air carrier operating from the airport. Anecdotally, the existing 1963 Seton Tower served as a key element in defining the airspace surfaces currently in use.

We hope that further discussion of these topics can occur very soon and can influence final determinations in the SFO Comprehensive Land Use Compatibility Plan. Please feel free to contact me at (213) 748-3431; [tyang@jensenpartners.com](mailto:tyang@jensenpartners.com), or Robert Walter of the Daughters of Charity Health System at (626) 744-3688; [RobertWalter@dochs.org](mailto:RobertWalter@dochs.org). Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Thomas Yang", with a long, sweeping flourish extending to the right.

Thomas Yang  
Partner for Architecture  
Jensen + Partners

Cc: Robert Walter – DOCHS, Larry Mandel – Seton Medical Center, Sarah Jensen – Jensen Partners; Jeanne Naughton – City of Daly City

# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Ms. Suzy Kalkin - Chief Planner  
Department of Economic and Community Development  
City of South San Francisco  
315 Maple Avenue P.O. Box 711  
South San Francisco, CA 94083

Reference: Letter dated 4/20/2012 Re: ALUCP for San Francisco International Airport

Dear Ms. Kalkin:

Thank you for your letter of April 20, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan (ALUCP) for the Environs of San Francisco International Airport. As a result of your comments and others, it became clear the importance of providing a clear message in the ALUCP and a consistency in dealing with the issues raised by the cities, County, and SFO. Our responses to your comments are provided in this letter.

**Table IV-1, footnote (a):** Since our discussions with you and the release of the preliminary revisions to the Draft ALUCP in March, C/CAG has reconsidered the policy refinement that would have allowed limited residential use within the CNEL 70 dB contour. After further consideration, it was decided that it is important to maintain the established policy of no housing in the CNEL 70dB. Therefore, Note (a) in Table IV-1 is being revised to state: “[Residential] use is compatible only on an existing lot of record if zoned for residential use.” Language relating to proximity to a BART station or within the Grand Boulevard area has been stricken.

The basis or justification for this reconsideration is as follows:

- 1- It is difficult to create an exception that doesn't open the door for other exceptions. There, was never any intent to open up the CNEL 70dB for housing.
- 2- The policy of no housing in the CNEL 70 dB has been in effect for over 25 years. There is no compelling reason to change this established policy.
- 3- The avoidance of new residential development within the CNEL 70 dB contour is justified by the guidance in the Caltrans Airport Land Use Planning Handbook and in federal guidance provided in 14 CFR Part 150, Appendix A, Table 1.
- 4- Allowing an exception in the CNEL 70dB would create confusion instead of the desired clarity of no housing in the CNEL 70dB.

**Table IV-2, Biosafety Levels 3 &4 Facilities:** C/CAG has attempted to set the safety standards for biomedical facilities with a view toward the importance of this industry in the local area, restricting only those facilities that pose the most serious public health and environmental risks. We referred to the *Biosafety in Microbiological and Biomedical Laboratories*, 5th Edition [BMBL], for guidance in setting standards. (This publication

was prepared by the U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health (HHS Publication No. (CDC) 21-1112, Revised December 2009.) pp. 34 – 45).  
Biomedical facilities are classified in four biosafety levels.

Biosafety Level 1 facilities are not subject to any restrictions under the proposed ALUCP. They are defined in the BMBL as follows:

Biosafety Level 1 is suitable for work involving well-characterized agents not known to consistently cause disease in immunocompetent adult humans, and present minimal potential hazard to laboratory personnel and the environment (BMBL, 30.)

Biosafety Level 2 facilities are considered “hazardous uses” that would be incompatible in Safety Zones 1 and 2 under the proposed ALUCP and uses to be “avoided” in the other safety zones.

Biosafety Level 2 builds upon BSL-1. BSL-2 is suitable for work involving agents that pose moderate hazards to personnel and the environment. It differs from BSL-1 in that: 1) laboratory personnel have specific training in handling pathogenic agents and are supervised by scientists competent in handling infectious agents and associated procedures; 2) access to the laboratory is restricted when work is being conducted; and 3) all procedures in which infectious aerosols or splashes may be created are conducted in BSCs or other physical containment equipment (BMBL, p. 33).

Biosafety Level 3 and 4 facilities pose the greatest risks and are considered incompatible within all safety zones under the Draft ALUCP. They are defined in the BMBL as follows:

Biosafety Level 3 is applicable to clinical, diagnostic, teaching, research, or production facilities where work is performed with indigenous or exotic agents that may cause serious or potentially lethal disease through the inhalation route of exposure (BMBL, p. 34).

Biosafety Level 4 is required for work with dangerous and exotic agents that pose a high individual risk of aerosol-transmitted laboratory infections and life-threatening disease that is frequently fatal, for which there are no vaccines or treatments, or a related agent with unknown risk of transmission (BMBL, p. 45).

Given the potentially lethal consequences of public exposure to these agents, it is prudent to avoid the development of these facilities in the airport safety zones.

**Exhibit IV-11, Airspace Protection:** Exhibit IV-11 portrays the requirements of 14 CFR Part 77, Subpart B, related to the filing with the FAA of Notices of Proposed Construction or Alteration (Form 7460-1). This is a federal regulation over which C/CAG, as the airport land use commission, has no control. The proposed ALUCP is not imposing this requirement; rather, it is disclosing this federal requirement as an informational aid to local planning officials and developers. This map depicts an

imaginary surface rising at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the edge of each runway. The sponsor of any proposed structure that would penetrate this imaginary surface must file Form 7460-1 with the FAA.

This exhibit does not depict maximum allowable structure heights. The maximum height limits proposed in the Draft ALUCP are depicted in Exhibits IV-17 and IV-18. Those maps portray the lowest combined airspace surfaces that provide required clearance of obstacles in accordance with longstanding FAA criteria. Those exhibits describe the maximum height to which structures can be built without receiving a Determination of Hazard from the FAA through the aeronautical/obstruction evaluation study process that begins with the filing of Form 7460-1. State law prohibits the construction of any object deemed by the FAA to be a hazard to air navigation, without receiving a construction permit from Caltrans. (Caltrans has never issued a permit for construction of an object deemed a hazard by the FAA.)

It is important to understand that the airspace surfaces depicted in Exhibits IV-17 and IV-18 have existed for many years and have been the basis for FAA obstruction and hazard determinations for many years. The significant change proposed in the Draft ALUCP is that these maps, courtesy of work undertaken by the Airport, are now available for use by local planners and developers to aid in construction planning early in the design and planning process.

In a very real sense, the Draft ALUCP is proposing no new substantive airspace policies and standards. Rather, it clarifies that compliance with Federal standards and state law is sufficient for compatibility with the airspace protection objectives of the ALUCP.

The FAA's airspace requirements are admittedly complex and perhaps confusing. I will request our consultant to give you a call and review the proposed airspace protection requirements of the ALUCP.

Thank you again for your comments and for your participation throughout the preparation of the updated plan. The official Draft ALUCP is posted on our website at the following location: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,



Richard Napier  
Executive Director



# C/CAG

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June 12, 2012

Mr. Aaron Aknin, AICP - Community Development Director  
City of San Bruno  
567 El Camino Real  
San Bruno, CA 94066-4299

Reference: Letter dated 4/20/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Aknin:

Thank you for your letter of April 20, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan (ALUCP) for the Environs of San Francisco International Airport. C/CAG's responses to your comments are provided in this letter.

**P-3, Table P-1:** C/CAG will consider your suggestion regarding outreach to property owners and residents of the areas affected by the updated ALUCP.

**Page 1-12:** C/CAG agrees with your point regarding the importance of aircraft noise abatement, the role of C/CAG as the airport land use commission for San Mateo County is limited, by statute, to land use planning. Airport land use commissions have no authority over airport operations or flight procedures. Thus, the purpose and need statements on page 1-12 are appropriate for the ALUCP document.

**Page 1-13, Section 1.6.1:** This comment appears to relate to the planned runway safety area improvements reflected in the draft, updated airport layout plan and discussed in this section. Those proposed improvements will result in the relocation of the runway ends, but will not result in the lengthening or expansion of the runways. Those proposed improvements will not result in any material changes in the airspace surfaces and will not affect maximum height limitations in the airport environs.

**Page I-14, first paragraph after bullet points:** This paragraph is intended only as a general overview of the intent of the ALUCP policies. This specific provision is explained in detail in Chapter III, Policy GP-4 beginning on page III-5. The relevant portions of the policy are quoted below:

### **GP-4.1 Modifications to Nonconforming Uses**

Modification of existing nonconforming land uses shall be permissible, provided that the modification does not increase the magnitude of the nonconformity. The magnitude of nonconformity shall be measured by:

1. For residential land uses, the number of dwelling units on the lot;
2. For nonresidential land uses, the size of the nonconforming use in terms of lot area and building floor area.



Where bedrooms or sleeping rooms are added to residential uses that are nonconforming with the noise compatibility policies of this ALUCP, those rooms must be sound-insulated to achieve an indoor noise level of CNEL 45 dB from exterior sources. In all cases, building modifications shall be subject to the airspace protection policies of this ALUCP.

#### **GP-4.2 Reconstruction of Nonconforming Use**

Nonconforming uses may be rebuilt to a density (for residential uses, dwelling units per acre) or size (for nonresidential uses, building floor area) not exceeding that of the original construction. In all cases, however, reconstructed nonconforming uses shall comply with the noise compatibility and airspace protection policies of this ALUCP.

**Page I-15, First paragraph:** This is explained in the definitions of “Existing Land Use” and “Vested Right” in Chapter III, pages III-3 and III-4, quoted below:

**Existing Land Use:** The actual use of land or the proposed use of the land evidenced by a *vested right* in the land as of the effective date of this ALUCP.

**Vested Right:** A right to the proposed use of land as demonstrated by any of the following:

- (a) A vesting tentative map that has been approved pursuant to California Government Code section 66498.1, and has not expired; or
- (b) A development agreement that has been executed pursuant to California Government Code section 65866, and remains in effect; or
- (c) A valid building permit that has been issued, substantial work that has been performed, and substantial liabilities that have been incurred in good faith reliance on the permit, pursuant to the California Supreme Court decision in *Avco Community Developers, Inc. v. South Coast Regional Com* (1976) 17 Cal.3d 785,791, and its progeny.

**Exhibit II-3:** Thank you for your information about the correct date of the San Bruno General Plan. We will review the plan document and verify that the land uses depicted in the Draft ALUCP are correct.

**Page II-12:** Your point regarding the effect of SFO itself on local development pressures is valid. We will consider the revision you suggest.

**Page II-30, 2.3.2.5:** C/CAG has no specific information about the frequency of large cargo jets. The airport activity forecasts that provided the basis for the forecast noise contour maps presented in the ALUCP projects an increase in air cargo operations (takeoffs and landings) of about 2,500 from 2009 to 2020. This equates to an average increase of about 3.4 arrivals and 3.4 departures per day. (See Jacobs Consultancy, February 2010, Technical Memorandum, Aviation Demand Forecasts, San Francisco International Airport, page 26.) The overall **percentage distribution** of operations by time-of-day is projected to remain constant from 2010 to 2020. Because of the forecast increase in total operations from 2010 to 2020, however, the **number of flights** during the evening and nighttime hours is projected to increase in direct proportion to the overall increase in total operations. See pages II-30 and II-31 in Chapter II of the Draft ALUCP.

**Page III-4 (General Policies):** C/CAG will address this suggestion in the CEQA Initial Study.

**Page III-5, Policy GP-4.1:** Policy GP-4.2 explains that “nonconforming uses may be rebuilt to a density (for residential uses, dwelling units per acre) or size (for nonresidential uses, building floor area) not exceeding that of the original construction.” These buildings may be rebuilt if torn down or destroyed by any cause. The construction of new, second dwellings, as described in state law, would not be allowed in areas where housing would be considered incompatible with the updated ALUCP. This situation would apply only in Safety Zone 1 and within the CNEL 70 dB contour.

**Page III-6, Policy GP-5.1:** This provision was intended to apply to new residential development proposed on vacant lots in residential only zoned areas within the CNEL 70 dB contour. After reviewing this proposed policy, we have decided to delete it because it is unduly complicated. The intent is achieved with simpler language in the revised version of Note (a) in Table IV-1 in Chapter IV, page IV-19.

**Page III-7, Policies GP-8.1 and GP-8.2:** Policies GP-8.1 and GP-8.2 are intended only to ensure that the Airport staff is informed of proposed land use policies and projects early enough in the review and approval process to provide comments to the ALUC and local governments. These policies would not grant the Airport any land use planning authority. Note that Policy GP-8.3, involving the formation of an Airport Vicinity Development Committee encourages consultation among local cities and the Airport staff on airport development proposals as well off-airport development.

Because C/CAG, as the airport land use commission for San Mateo County, has no authority over airport operations and because the SFO/Community Roundtable has been created to discuss airport operations and procedures, it is inappropriate and unnecessary for the ALUCP to include provisions advising the Airport staff to discuss proposed operational changes with local cities.

**Page III-8, Policy GP-9:** No detailed analysis of the specific impact of the updated ALUCP on general plan policies has been undertaken. It is acknowledged that general plan revisions to address the updated ALUCP could require longer than six months. Failure to meet the statutory deadline carries no specific sanctions. The only consequence is that C/CAG would continue to review proposed land use projects, in addition to proposed plan and zoning amendments.

**Page III-17, Policy GP-13.3:** This policy reflects state law, which requires that ALUCPs must reflect the master plan or airport layout plan for the subject airport. While the ALUCP must be updated to reflect changes in the airport master plan, the nature of any updated policies or compatibility zone boundaries is a decision to be made by C/CAG, not the airport. SFO has no land use regulatory authority.

**Page IV-18, Table IV-1:** The requested comparison chart will be provided in the final CEQA Initial Study.

**Page IV-11, Policy IP-2:** Under state law, airport land use commissions may require local agencies to submit all proposed development projects for determinations of consistency with the ALUCP until the local agencies have made their local plans and zoning codes consistent with the ALUCP or they have overridden the ALUCP as provided by law. Pub. Util. Code, Section 21676.5(a)). See Policy GP-10 in Chapter III, page III-9.

**Page IV-17, Policy NP-2:** The proposed language change will be made as suggested.

**Page IV-17, Policy NP-3:** While the primary purpose of the easement is to provide a measure of protection to the airport, easements also provide a fair disclosure function. We have added an explanation that the easement requirement is also intended to ensure compliance with the State noise law.

**Page IV-18:** The proposed language change will be made as suggested.

**Page IV-20, SP-1:** This comment, which introduces the subsequent comments in the letter, does not require a response.

**Page IV-15, SP-2:** The proposed language change will be made as suggested.

**Page IV-25, Inner Approach Zone:** In Table IV-2, the requirements of Safety Zone 2, the Inner Approach/Departure Zone, have been revised to exempt home day care centers from the list of incompatible uses to avoid conflict with state law. We have chosen not to accept your request to allow day care centers as ancillary uses in businesses within Safety Zone 2. We recognize that child day care centers are often included in modern office and commercial buildings. At the same time, the potential risks in Safety Zone 2 indicate that land uses serving particularly vulnerable populations, such as children requiring supervision in case of an evacuation, should not be allowed in that zone. This is consistent with the guidance provided in the most recent edition of the *California Airport Land Use Handbook* (page 4-21) published by Caltrans in 2011.

As you suggested, C/CAG has refined the definition of “critical public utilities.” They include only electrical power generation plants, electrical substations; wastewater treatment plants, and public water treatment plants. (Water pump stations and sewage lift stations would not be covered under this definition.)

**Page IV-53, Policy AP-3:** The former CLUP did not include as much detail as the proposed ALUCP related to airspace protection and height limits. At the same time, however, the substantive policies of the proposed ALUCP remain the same as the previous CLUP. The airspace policies of the proposed ALUCP are written to allow developers maximum flexibility in setting building heights, consistent with federal regulations and state law.

The proposed ALUCP includes a comprehensive explanation of federal and state laws and regulations relating to airspace protection, which have been in effect for many years and which apply regardless of the specific policies in the ALUCP. The intent of the ALUCP, with respect to airspace protection policies, is to explain the federal regulations that apply to proposed new construction, to facilitate compliance with those regulations, and to provide information allowing planners and builders to determine, in advance of FAA-required aeronautical evaluations, the potential for FAA Determinations of Hazard. The maximum height limits depicted in Exhibits IV-17 and IV-18 represent the heights above which proposed buildings are likely to be found by the FAA to be hazards to air navigation. These airspace surfaces have existed for many years and have been the basis for FAA obstruction and hazard determinations for many years. Under state law, structures determined by the FAA to be hazards can be built only upon issuance of a permit by the State Department of Transportation. Caltrans has never issued a permit for the construction of an object found to be a hazard.

The significant change proposed in the Draft ALUCP is that these maps, courtesy of work undertaken by the Airport, are now available for use by local planners and developers to aid in construction planning early in the design and planning process. The iALP tool developed by the SFO Planning Office allows users to determine the heights of the critical airspace surfaces above the ground throughout the SFO environs. Your staff should be able to develop the height analysis

you request in your letter with the aid of the tool. The iALP tool is easy to use, but may require some instruction to interpret its results. The tool reports two kinds of results:

1. The height above which the sponsor of a proposed project must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA, in accordance with federal regulations (14 CFR Part 77, §77.9).
2. The height above which the FAA is likely to determine that a proposed structure is a hazard to air navigation.

The FAA's airspace requirements are admittedly complex and perhaps confusing. Please give me a call if you would like me to arrange for our consultant to answer questions about the regulations and ALUCP policies or if you would like help with the use of the iALP airspace tool.

Thank you again for your comments and for your participation throughout the preparation of the updated plan. The official Draft ALUCP is posted on our website at the following location:  
[www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,

A handwritten signature in blue ink that reads "Richard Napier". The signature is written in a cursive, flowing style.

Richard Napier  
Executive Director



# C/CAG

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June 12, 2012

Mr. John Bergener - Airport Planning Manager  
San Francisco International Airport  
Bureau of Planning and Environmental Affairs  
P.O Box 8097  
San Francisco, CA 94128

Reference: Letter dated 4/20/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Bergener:

Thank you for your letter of April 20, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. Our responses to your comments are numbered in accordance with the numbering in your letter.

**Comment 1:** The C/CAG staff and our consultant acknowledge your concerns relating to the preliminary draft policy that would have allowed limited residential use within the CNEL 70 dB contour under certain circumstances. After further consideration, C/CAG has decided to revise “Note (a)” in Table IV-1 to state: “[Residential] use is compatible only on an existing lot of record if zoned for residential use.” Language relating to proximity to a BART station or within the Grand Boulevard area has been stricken.

Based on the discussion at the March 22 ALUC meeting and consultations with local city officials, we decided that any policies opening the door to new residential development within the CNEL 70 dB contour would be unwise. The avoidance of new residential development within the CNEL 70 dB contour has been a longstanding policy for over 25 years in the area and is amply justified by the guidance in the Caltrans Airport Land Use Planning Handbook and in federal guidance provided in 14 CFR Part 150, Appendix A, Table 1.

**Comment 2:** The revisions to the Draft Plan discussed above will also address this comment.

**Comment 3:** The revision to Policy GP-4.2 in Chapter 3 (page III-5) relating to the reconstruction of nonconforming schools and hospitals has been made and is reflected in the official Draft ALUCP posted on our website.

Thank you again for your comments. An updated Draft ALUCP is posted on our website at the following location: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,

A handwritten signature in blue ink that reads "Richard Napier". The signature is written in a cursive style with a large initial 'R'.

Richard Napier  
Executive Director

# C/CAG

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June 12, 2012

Mr. Brian Millar, Director of Economic and Community Development  
City of Daly City  
333 90<sup>th</sup> Street  
Daly City, CA 94015-1895

Reference: Letter dated 2/28/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Millar:

Thank you for your letter of February 20, 2012 commenting on the January 2012 Draft of the Airport Land Use Compatibility Plan (ALUCP) for the Environs of San Francisco International Airport. C/CAG's responses to your comments are provided in this letter.

- 1- General Policy GP4.1 (page iii-5)** relative to nonconforming uses have been further clarified in the ALUCP. Residential uses are nonconforming uses within the CNEL 65-70dB noise contours. However, residential can be allowed by insulating the property to achieve a CNEL of 45dB interior and by executing an aviation easement (Appendix G Page 8).
  
- 2- Airspace Protection Policy AP-3:** The former CLUP did not include as much detail as the proposed ALUCP related to airspace protection and height limits. At the same time, however, the substantive policies of the proposed ALUCP remain the same as the previous CLUP. The airspace policies of the proposed ALUCP are written to allow developers maximum flexibility in setting building heights, consistent with federal regulations and state law. The proposed ALUCP includes a comprehensive explanation of federal and state laws and regulations relating to airspace protection, which have been in effect for many years and which apply regardless of the specific policies in the ALUCP. The intent of the ALUCP, with respect to airspace protection policies, is to explain the federal regulations that apply to proposed new construction, to facilitate compliance with those regulations, and to provide information allowing planners and builders to determine, in advance of FAA-required aeronautical evaluations, the potential for FAA Determinations of Hazard. The maximum height limits depicted in Exhibits IV-17 and IV-18 represent the heights above which proposed buildings are likely to be found by the FAA to be hazards to air navigation. These airspace surfaces have existed for many years and have been the basis for FAA obstruction and hazard determinations for many years. Under state law, structures determined by the FAA to be hazards can be built only upon issuance of a permit by the State Department of Transportation. Caltrans has never issued a permit for the construction of an object found to be a hazard.

The significant change proposed in the Draft ALUCP is that these maps, courtesy of work undertaken by the Airport, are now available for use by local planners and developers to aid in construction planning early in the design and planning process. The iALP tool developed by the SFO Planning Office allows users to determine the heights of the critical airspace surfaces above the ground throughout the SFO environs. Your staff should be able to



develop the height analysis you request in your letter with the aid of the tool. The iALP tool is easy to use, but may require some instruction to interpret its results. The tool reports two kinds of results:

1. The height above which the sponsor of a proposed project must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA, in accordance with federal regulations (14 CFR Part 77, §77.9).
2. The height above which the FAA is likely to determine that a proposed structure is a hazard to air navigation.

The FAA's airspace requirements are admittedly complex and perhaps confusing. Please give me a call if you would like me to arrange for our consultant to answer questions about the regulations and ALUCP policies or if you would like help with the use of the iALP airspace tool.

Thank you again for your comments and for your participation throughout the preparation of the updated plan. The official Draft ALUCP is posted on our website at the following location:  
[www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,

A handwritten signature in blue ink that reads "Richard Napier". The signature is written in a cursive, slightly slanted style.

Richard Napier  
Executive Director

# C/CAG

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June 12, 2012

Mr. Brian Millar, Director of Economic and Community Development  
City of Daly City  
333 90<sup>th</sup> Street  
Daly City, CA 94015-1895

Reference: E-mail dated 4/20/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Millar:

Thank you for your e-mail of April 20, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan (ALUCP) for the Environs of San Francisco International Airport. C/CAG's responses to your comments are provided in this letter.

- 1- Height Limitations and Seton Hospital (Airspace Protection Policy AP-3):** C/CAG has had discussions with Seton Hospital relative to any potential height conflicts. Attached is a copy of the letter sent to Seton. It is important to keep in mind that this update to the ALUCP is not changing the height requirements. Rather it is providing addition information to reduce that chance that the FAA will make a negative determination on the height. This will enable any issue to be caught earlier in the design process. It is important for Seton to work closely with San Francisco International Airport to ensure that the Seton Hospital Tower design does not have a height conflict.

The former CLUP did not include as much detail as the proposed ALUCP related to airspace protection and height limits. At the same time, however, the substantive policies of the proposed ALUCP remain the same as the previous CLUP. The airspace policies of the proposed ALUCP are written to allow developers maximum flexibility in setting building heights, consistent with federal regulations and state law. The proposed ALUCP includes a comprehensive explanation of federal and state laws and regulations relating to airspace protection, which have been in effect for many years and which apply regardless of the specific policies in the ALUCP. The intent of the ALUCP, with respect to airspace protection policies, is to explain the federal regulations that apply to proposed new construction, to facilitate compliance with those regulations, and to provide information allowing planners and builders to determine, in advance of FAA-required aeronautical evaluations, the potential for FAA Determinations of Hazard. The maximum height limits depicted in Exhibits IV-17 and IV-18 represent the heights above which proposed buildings are likely to be found by the FAA to be hazards to air navigation. These airspace surfaces have existed for many years and have been the basis for FAA obstruction and hazard determinations for many years. Under state law, structures determined by the FAA to be hazards can be built only upon issuance of a permit by the State Department of Transportation. Caltrans has never issued a permit for the construction of an object found to be a hazard.

The significant change proposed in the Draft ALUCP is that these maps, courtesy of work undertaken by the Airport, are now available for use by local planners and developers to aid in construction planning early in the design and planning process. The iALP tool developed by the SFO Planning Office allows users to determine the heights of the critical airspace surfaces above the ground throughout the SFO environs. Your staff should be able to develop the height analysis you request in your letter with the aid of the tool. The iALP tool is easy to use, but may require some instruction to interpret its results. The tool reports two kinds of results:

1. The height above which the sponsor of a proposed project must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA, in accordance with federal regulations (14 CFR Part 77, §77.9).
2. The height above which the FAA is likely to determine that a proposed structure is a hazard to air navigation.

The FAA's airspace requirements are admittedly complex and perhaps confusing. Please give me a call if you would like me to arrange for our consultant to answer questions about the regulations and ALUCP policies or if you would like help with the use of the iALP airspace tool.

- 2- 65-70 dB Noise Contour Mitigation** - General Policy GP4.1 (page iii-5) relative to nonconforming uses have been further clarified in the ALUCP. Residential uses are nonconforming uses within the CNEL 65-70dB noise contours. However, residential can be allowed by insulating the property to achieve a CNEL of 45dB interior and by executing an avigation easement (Appendix G Page 8).
- 3- Avigation Easements (Appendix G Page 8)** - Avigation easements are used to allow residential uses within the CNEL 65-75 dB noise contour. Appendix G Page 8 provides the specific avigation easement language required.

Thank you again for meeting with us and your comments and for your participation throughout the preparation of the updated plan. The official Draft ALUCP is posted on our website at the following location: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,



Richard Napier  
Executive Director

# C/CAG

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June 12, 2012

Mr. Thomas Yang - Partner for Architecture  
Jensen and Partners  
950 South Grand Avenue 4<sup>th</sup> Floor  
Los Angeles, CA 90015

Reference: Letter dated 5/03/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Yang:

Thank you for your letter of May 3, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan (ALUCP) for the Environs of San Francisco International Airport. C/CAG's responses to your comments are provided in this letter. Your letter expressed concerns about conflict between the airspace height restriction and the design for Seton's new hospital tower.

**Page IV-53, Policy AP-3:** It is important to keep in mind that this ALUCP is not changing the height restrictions in any way. It is essentially providing additional information such that Seton will know in advance the likelihood of whether the FAA will allow the height.

The former CLUP did not include as much detail as the proposed ALUCP related to airspace protection and height limits. At the same time, however, the substantive policies of the proposed ALUCP remain the same as the previous CLUP. The airspace policies of the proposed ALUCP are written to allow developers maximum flexibility in setting building heights, consistent with federal regulations and state law.

The proposed ALUCP includes a comprehensive explanation of federal and state laws and regulations relating to airspace protection, which have been in effect for many years and which apply regardless of the specific policies in the ALUCP. The intent of the ALUCP, with respect to airspace protection policies, is to explain the federal regulations that apply to proposed new construction, to facilitate compliance with those regulations, and to provide information allowing planners and builders to determine, in advance of FAA-required aeronautical evaluations, the potential for FAA Determinations of Hazard. The maximum height limits depicted in Exhibits IV-17 and IV-18 represent the heights above which proposed buildings are likely to be found by the FAA to be hazards to air navigation. These airspace surfaces have existed for many years and have been the basis for FAA obstruction and hazard determinations for many years. Under state law, structures determined by the FAA to be hazards can be built only upon issuance of a permit by the State Department of Transportation. Caltrans has never issued a permit for the construction of an object found to be a hazard.

The significant change proposed in the Draft ALUCP is that these maps, courtesy of work undertaken by the Airport, are now available for use by local planners and developers to aid in construction planning early in the design and planning process. The iALP tool developed by the SFO Planning Office allows users to determine the heights of the critical airspace surfaces above the ground throughout the SFO environs. You should be able to develop the height analysis with the aid of the tool. The iALP tool is easy to use, but may require some instruction to interpret its results. The tool reports two kinds of results:

1. The height above which the sponsor of a proposed project must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA, in accordance with federal regulations (14 CFR Part 77, §77.9).
2. The height above which the FAA is likely to determine that a proposed structure is a hazard to air navigation.

The FAA's airspace requirements are admittedly complex and perhaps confusing. Please give me a call if you would like me to arrange for our consultant to answer questions about the regulations and ALUCP policies or if you would like help with the use of the iALP airspace tool.

C/CAG would urge you to work closely with San Francisco International Airport to establish accurate height limitations for the site. This updated ALUCP will provide the necessary height data to ensure the new hospital towers are compatible with the appropriate flight surfaces. The official Draft ALUCP is posted on our website at the following location:  
[www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,

A handwritten signature in blue ink that reads "Richard Napier". The signature is written in a cursive, flowing style.

Richard Napier  
Executive Director

# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

*Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay • Hillsborough • Menlo Park • Millbrae • Pacifica •  
Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

June 18, 2012

Mr. Clay Holstine - City Manager  
City of Brisbane  
50 Park Place  
Brisbane, CA 94005-1310

Reference: Letter dated 4/16/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Holstine:

Thank you for your letter of April 16, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. Our responses to your comments are provided in this letter.

**CNEL Noise Metric and Contours:** The following language has been added to page IV-13 to address your comment.

The CNEL noise contours presented in Exhibit IV-6 designate the area where noise exposure is great enough to warrant land use controls to promote noise compatibility. It is acknowledged that aircraft noise at levels below CNEL 65 dB can be disturbing to some people.

**Airport Influence Area, Boundary of Area A:** The Brisbane city limits are less than three miles from the airport property, and data presented in the Draft ALUCP clearly indicate that the city is subject to regular aircraft overflights. (See Exhibits II-7 and II-8 in Chapter 2 of the Draft ALUCP.) The intent of the state legislature in establishing the airport disclosure requirements was to ensure that prospective buyers of residential property are informed of the potential for airport-related impacts, including noise and overflights. Under state law, this requirement applies within the Airport Influence Area (AIA) defined in the applicable ALUCP (Bus. & Prof. Code, §11010). Given the exposure of Brisbane to SFO-related aircraft activity, it is reasonable for the Brisbane to be included within the AIA.

**Relationship to Airport Operations:** Preface Page 2 The following language was added to address Brisbane's concern relative to operations:

“In adopting this ALUCP, the C/CAG Board acknowledges those forecasts and airport development plans as providing an appropriate foundation for airport land use compatibility planning in the SFO environs. C/CAG and its member jurisdictions, however, retain the right to consult and negotiate with the San Francisco Airport Commission and the SFO staff on all matters relating to airport development and operations, including noise abatement procedures.”

Thank you again for your comments. The official Draft ALUCP is posted on our website at the following location: [www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,

A handwritten signature in blue ink that reads "Richard Napier". The signature is written in a cursive, flowing style.

Richard Napier  
Executive Director



*City of Millbrae*  
621 Magnolia Avenue, Millbrae, CA 94030

**MARGE COLAPIETRO**  
Mayor  
**GINA PAPAN**  
Vice Mayor  
**NADIA V. HOLOBER**  
Councilwoman  
**WAYNE J. LEE**  
Councilman  
**ROBERT G. GOTTSCHALK**  
Councilman

June 20, 2012

Richard Napier, Executive Director  
City/County Association of Governments of San Mateo County  
555 County Center, 5<sup>th</sup> Floor  
Redwood City, CA 94063

Dear Richard,

I was given the opportunity to review and comment on the Draft Comprehensive Airport Land Use Compatibility Plan (ALUCP). Accompanied with the draft document, I received your letter to all planning directors on April 6, 2012, requesting that the comments on the draft document be provided to C/CAG by April 20, 2012. Upon my review and analysis of the document, I forwarded you my comments on April 18, 2012, via email, two days prior to the set deadline.

Today, I opened the package you sent me which contains the revised document, the June 21<sup>st</sup> meeting agenda and an attachment regarding "comments and responses to letters". By reviewing the attachment, I realized my comments regarding the ALUCP were not included in the attachment and also a reminder that I did not receive any response back from you on my comments provided on April 18, 2012.

Considering the ALUC meeting is taking place tomorrow and since my comments were not included in the received documents, I have great concerns regarding the draft document's procedure and its effects on the City of Millbrae land use policies including its General Plan and Millbrae Station Area Specific Plan (MSASP). I would like to reiterate my concerns regarding the draft document by including it in this letter and ask that the content of this letter be included in the ALUS meeting and future review of ALUCP.

Copied from word document sent on April 18, 2012:

Comments on February 2012 Draft ALUCP

General Comments

1. We still need the consultant to respond to our request for info on what the airport safety zone was at time of MSASP adoption in 1998.

City Council/City Manager/City Clerk  
(650) 259-2334

Building Division/Permits  
(650) 259-2330

Community Development  
(650) 259-2341

Finance  
(650) 259-2350

Fire  
(650) 259-2400

Police  
(650) 259-2300

Public Works/Engineering  
(650) 259-2339

Recreation  
(650) 259-2360



2. BART should be informed of the document and the process since their property located on the northeast side of Millbrae Avenue and Rollins Road intersection (site 6 of MSASP) will be severely affected by the proposal.
3. All mentions of ALUCP should maybe be "CALUCP" to match Comprehensive Airport Land Use Compatibilty Plan as listed in the footer at bottom of every page.
4. Should strike "San Francisco International Airport and Environs" located at bottom of page because it is repeated in that footer.
5. Where is page III-2 (renumber)?
6. Where are pages III-13 and III-14 (renumber)?
7. An organizational chart showing ALUCommitte, ALUCommission, C/CAG, FAA, SFO, cities and districts, etc. would be helpful.

Comments by Section

GP-2 "The CALUCP shall be amended not more than once per calendar year **and not less than once per five calendar years...**"; please add text shown in bold in order to truly maintain a current and updated document.

GP-4.1 "residential units"; what if an existing 1-unit structure is divided into 2 units without any physical expansion?

"CNEL 45 dB"; this is pretty quiet – how achievable is it?

GP-4.4 "Local government policies that specify shorter periods shall **supersede this policy**"; please add text shown in bold for more clarity.

GP-51: "compatibility with the character of the surrounding area"; but, Millbrae's MSASP, by definition, calls for larger and more intense development, different architecture, more height, etc than what is currently there.

"Increases above the nominal development density set by the local zoning ordinance..."; but this is exactly what Millbrae would want to do to offset the loss of development on Site 7 and part of Site 6.

GP-7 "any parcel that is split by compatibility zone boundaries shall be considered as if it were multiple parcels..."; this is good, but what about the width of the boundary line as drawn on the map which could effect another 50 feet of property?

GP-9 "State law gives affected local agencies 180 calendar days"; so Millbrae would revise Sites 6 +7 in the MSASP for no development, but 180 days is probably not enough time to re-allocate the development potential lost from those sites to other sites because of the likely CEQA process we'd have to go through for that.

End of first paragraph on page III-9 “(see Section 3.3.3. below)” should say 3.3.1.

GP-10.1 and GP-10.2; don’t see the difference between these two provisions.

GP-12.1 “A diagram of the process is shown on Exhibit III-1.”; exhibit not included.

GP-12.3 “the Airport Land Use Commission (C/CAG Board) will work cooperatively with...to provide equitable funding”; what does this mean? Will cities have to pay a review fee?

3.3.2 “Delineate the compatibility criteria to be applied...”; this seems to mean creating a generic “menu” of ways a project could demonstrate consistency.

“Identify the mechanisms to be used to ensure that applicable compatibility criteria are incorporated...”; this seems to mean actual project features/conditions on a real project.

“..but can be subject to appropriate ministerial development standards”; what does this mean?

GP-13.3 “...Airport Land Use Commissions have no jurisdiction over the operation of airports”; so then the airport master plan can easily be changed, and when changed, force cities to keep revising their plans in order to remain consistent?

3.3.3.2 “The proposed local agency action is determined by the local agency to be Consistent...just as if the Airport Land Use Commission (C/CAG Board) had found the proposed action to be consistent...”; this is quite a long shot.

“If a city or county overrides an action by the airport land use commission with respect to a publicly owned airport that is not operated by that city or county...”; this is a BIG disincentive for cities to attempt override an CALUC decision.

“A diagram illustrating the local agency override process is provided in Exhibit III-2.”; exhibit not included.

Thank you again for meeting with me and my staff and allowing the City to comment on this draft document. We look forward to your response and to work with you and your staff to resolve the listed comments and concerns.

Sincerely,



Farhad Mortazavi  
Community Development Director



# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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June 21, 2012

Mr. Farhad Mortazavi, Community Development Director  
City of Millbrae  
621 Magnolia  
Millbrae, CA 94030

Reference: Letter dated 4/18/2012 Re: ALUCP for San Francisco International Airport

Dear Mr. Mortazavi:

Thank you for your letter of April 18, 2012 commenting on the March 2012 Draft of the Airport Land Use Compatibility Plan (ALUCP) for the Environs of San Francisco International Airport. C/CAG's responses to your comments are provided in this letter.

### **General Comments**

- 1- Our consultant, Ricondo & Associates, reviewed the 1996 CLUP for SFO, which was based on the Airport Layout Plan from August 1993. The only safety zone included in the 1996 CLUP was the runway protection zone (RPZ), equivalent to Zone 1 in the proposed ALUCP update. The RPZs are defined by the Airport in compliance with specific criteria developed by the FAA. The RPZs in effect at the time the MSASP was adopted did not extend into the boundaries of the MSASP.
- 2- We will inform the appropriate officials at BART of the proposed ALUCP update.
- 3- Necessary editing corrections will be made prior to release of the official draft ALUCP.
- 4- Necessary editing corrections will be made prior to release of the official draft ALUCP.
- 5- This is an intentionally blank page. Necessary editing corrections will be made prior to release of the official draft ALUCP.
- 6- Necessary editing corrections will be made prior to release of the official draft ALUCP.
- 7- A chart illustrating the relationships among the various agencies and organizations will be included as part of training material after adoption of the ALUCP.

### **Comments by Section**

**GP-2:** State law limits the frequency of ALUCP amendments to no more than once a year. We appreciate and agree with your suggestion that the ALUCP should be updated in a timely manner. We are concerned, however, about tying updates to specific time requirements. Instead we will add language explaining the conditions under which C/CAG intends to update the ALUCP. Those include:

- After adoption of a new airport master plan or an updated airport layout plan
- After the update of airport noise exposure forecasts

**GP-4.1:** The intent of Policy GP-4-1 is to prevent an increase in the number of nonconforming dwellings within the CNEL 70 dB, where residential use is incompatible. Within the CNEL 65-70 dB, residential use would be nonconforming only if it had not previously been sound-insulated. Within this contour range, a house could be divided into two units and be consistent with the ALUCP if the additional unit was sound-insulated to achieve the required interior noise level.

You ask about the feasibility of achieving an interior sound level of CNEL 45 db. This is actually a very achievable requirement in areas exposed to exterior noise between CNEL 65 and 75 db. The state building code requires that new multifamily housing be built to meet this interior sound level. Our consultant has advised me that standard construction can readily achieve an outdoor to indoor noise level reduction of 20 dB or greater (with windows and doors closed). (This means that a home on the CNEL 65 dB contour line would have an interior sound level of CNEL 45 db.) Additional measures, such as the installation of acoustical windows and extra thermal insulation, can boost the sound attenuation capabilities of a home considerably.

**GP-4.1:** Local governments are free to make their plans and codes more restrictive than any requirements of the ALUCP, including the nonconforming use provisions. We do not believe it is necessary to specifically call out the ALUCP's nonconforming use provisions as a place where local governments can make their own requirements more restrictive.

**GP5.1:** This entire policy has been eliminated from the draft ALUCP.

**GP-7:** Staff will clarify the exact boundary on a case by case basis. All ALUCP mapping is available as GIS shape files, which should help in determining the precise location of the compatibility zone boundaries on the ground. To the extent practical we will try to avoid setting a boundary that splits a parcel.

**GP-9:** State law (Gov. Code Section 64302) specifies that local governments must make their land use plans and regulations consistent with an updated ALUCP within 180 days after the adoption of an updated ALUCP. There are no sanctions imposed on local governments if they cannot meet this schedule.

**GP-10.1 and GP 10.2:** The language has been clarified. Section 10.1 refers to "ALUCP Review before Local Agency Makes Plans Consistent with ALUCP or Overrides," and Section 10.2 to "ALUCP Review after Local Agency Makes Plans Consistent with ALUCP or Overrides". Before the local governments update their plans and codes to be consistent with the new ALUCP, they will have to submit all land use policy and development actions to C/CAG for consistency determinations. After they make their plans and codes, they need only submit Plan and code amendments to C/CAG.

**GP-12.1:** Exhibit III-1 has been added.

**GP 12.3:** Currently the cost of C/CAG's airport land use compatibility work is covered through C/CAG member fees. Adoption of the ALUCP would not involve any additional city fees. This policy is included essentially as a notice that the question of funding sources for C/CAG's airport land use compatibility function may need to be considered in the future.

**3.3.2:** The material you cite is quoted directly from the Caltrans Airport Land Use Planning Handbook (October 2011). Our understanding of the meaning is as follows:

*“Delineate the compatibility criteria to be applied.”* This means that local land use plans, policies, and regulations must actually include the land use compatibility criteria from the ALUCP and provide guidance as to how the criteria are to be applied to proposed land use actions under the jurisdiction of the local government.

*“Identify mechanism to be used to ensure that applicable compatibility criteria are incorporated.”* This means that the local land use plans and regulations must include policies ensuring that any compatibility conditions stipulated in the ALUCP are actually incorporated into development projects. For example, the ALUCP requires that measures be taken to ensure that new housing within the CNEL 65 dB contour is capable of reducing exterior noise to CNEL 45 dB indoors. Local zoning or building regulations should include provisions to ensure that the required measures are actually taken.

*“.. but can be subject to appropriate ministerial development standards.”* This means that local land use plans, policies, and regulations should be written to ensure that even projects subject only to ministerial review by local administrative personnel, in contrast to projects requiring legislative or quasi-judicial review by planning commissions, city councils, and boards of zoning adjustment, should empower the administrative staff to ensure that land use compatibility standards and criteria are actually provided by the project developer.

**GP-13.3:** It is correct that Airport Land Use Commissions have no control over airport operations or Airport Layout Plans (ALP). Keep in mind, however, that the FAA does have authority over changes to ALPs, and any revisions must comply with a complex set of FAA design requirements. In addition, changes to ALPs and airport master plans are subject to the environmental review requirements of CEQA and the National Environmental Policy Act (NEPA). Accordingly, significant changes to ALPs and airport master plans take quite a bit of time and involve a degree of public review.

**3.3.3.2:** We agree that the language you cite in the first paragraph of this section is unclear. We propose revising it to read as follows:

The proposed land use action may proceed through the local agency review and permitting processes just as if it had been found consistent with this ALUCP by the Airport Land Use Commission (C/CAG Board).

This change will be reflected in the official draft of the proposed ALUCP.

You are correct that an override is a significant decision that may carry additional liability for the agency making the override decision.

Exhibit III-2 has been provided in the May 2012 draft document and will be included in the official draft of the proposed ALUCP.

Thank you again for your comments and for your participation throughout the preparation of the updated plan. The official Draft ALUCP is posted on our website at the following location:  
[www.ccag.ca.gov/plans\\_reports.html](http://www.ccag.ca.gov/plans_reports.html).

Sincerely,

A handwritten signature in blue ink that reads "Richard Napier". The signature is written in a cursive, flowing style.

Richard Napier  
Executive Director



HEADQUARTERS

**CHICAGO**

20 N Clark Street, Suite 1500  
Chicago, Illinois 60602  
312. 606. 0611

NORTHERN CALIFORNIA

**SAN FRANCISCO**

221 Main Street, Suite 205  
San Francisco, California 94105  
415. 547.1930

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